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THESIS

THE IMPACT OF PREMIUM TRANSPORTATION ON USMC LOGISTICS PROCESSES

by

William T. Hagerott

December, 1997

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ABSTRACT *(maximum 200 words)*

The purpose of this thesis is to use simulation models to evaluate the benefits and costs of premium transportation on inventory levels at I MEF, Camp Pendleton, CA. The core of the research focuses on studying the impact that 100% premium transportation has on Order Ship Time (OST) and requisitioning objective inventory levels at I MEF. Although premium transportation is expensive, the savings in inventory costs provide an opportunity to offset transportation costs, decrease OST, and improve overall customer service. The research results show that the benefits generally outweigh the costs when premium transportation is used for consumable items. Premium resupply from the New Cumberland/Mechanicsburg Depot resulted in significant OST reductions while incurring an additional cost of only $400 per month. Premium resupply from the Sharpe/Tracy Depot is available at no cost because the depot has unused premium transportation capacity readily available. Repairable items, however, do not appear to support the use of premium transportation due to their high weight, and thus high transportation cost.

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THE IMPACT OF PREMIUM TRANSPORTATION ON USMC LOGISTICS PROCESSES

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ABSTRACT

The purpose of this thesis is to use simulation models to evaluate the benefits and costs of premium transportation on inventory levels at I MEF, Camp Pendleton, CA. The core of the research focuses on studying the impact that 100% premium transportation has on Order Ship Time (OST) and requisitioning objective inventory levels at I MEF. Although premium transportation is expensive, the savings in inventory costs provide an opportunity to offset transportation costs, decrease OST, and improve overall customer service. The research results show that the benefits generally outweigh the costs when premium transportation is used for consumable items. Premium resupply from the New Cumberland/Mechanicsburg Depot resulted in significant OST reductions while incurring an additional cost of only $400 per month. Premium resupply from the Sharpe/Tracy Depot is available at no cost because the depot has unused premium transportation capacity readily available. Repairable items, however, do not appear to support the use of premium transportation due to their high weight, and thus high transportation cost.

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I. INTRODUCTION

A. BACKGROUND

Marine Corps units often face slow logistics response times in meeting their requirements.[1] Although many Marine Corps logisticians recognize this problem, their efforts to solve it generally conflict with pressure from Congress to reduce costs.

This chapter describes the development of an idea to use transportation and inventory tradeoffs to simultaneously address logistics response times and costs.

1. Precision Logistics

" 'Precision Logistics' is the art and science of providing the warfighter with the right thing, at the right place, at the right time, with the least amount of effort, signature, and cost" (Hamilton, 1996). " Precision Logistics" holds great promise within the Marine Corps, and across all the military services, to enhance logistical support while reducing cost. It is a concept that acknowledges the need to simultaneously improve logistics processes while reducing costs. One fundamental method

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[1] Dr. Marc Robbins, RAND Corporation, provided general information on Marine Corps logistics response times during several phone conversations in September, 1997. Specific information is contained in an unpublished RAND report which discusses Marine Corps logistics processes.

to achieve these conflicting goals is through Order Ship Time (OST) reductions.

2. Order Ship Time (OST)

The Commandant of the Marine Corps established OST reductions as a key step in improving Marine Corps logistics response times (CMC, DTG 150245ZNOV96). OST is the total time between a customer supply requisition and the receipt of the supply item by the customer (DoD 4140.1-R). One method of addressing OST is the Enhanced Transportation Service program.

3. Enhanced Transportation Service (ETS) Program

ETS is a concept developed at Marine Corps Logistics Bases, Albany.[2] ETS uses premium air transportation to move items from Albany, Georgia, to designated locations. All items priority 01-03 are eligible for the program. The program effectively reduces both OST and stockage levels. Although the concept has great potential, it would be cost prohibitive to test its application in a real environment.

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[2] A point paper entitled *MARCORLOGBASES Albany Enhanced Transportation Service*, dated July 11, 1996, discussed the ETS concept. Major Scott Allen and Captain Andy Stokes, both from Marine Corps Logistics Bases (MarCorLogBases) Albany, Georgia, co-authored the paper.

4. *Cost Benefit Analysis of the Enhanced Transportation Service Program*

Prior research entitled *Cost Benefit Analysis of the Enhanced Transportation Service Program* used a simulation model to study the ETS program for resupply between Marine Corps Logistics Bases, Albany, and Marine Corps units in California.[3] It used one year of supply data on 26 repairable items. It concluded that " the cost of premium transportation service is significantly less than the cost of additional inventory that would have to be carried if premium transportation were not utilized. Therefore, further research of the ETS Program is warranted."

5. Expand the Study and Eliminate the Limitations

This research begins where the *Cost Benefit Analysis of the Enhanced Transportation Service Program* research stopped. It expands the study to include 52 repairable and 83 consumable items, premium air and surface transportation, three sources of wholesale supply, and the elimination of most of the previous thesis' limitations. An important element of this research is the " priority-less" use of premium transportation. This means

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[3] Captain Mike Attcheson, USMC, conducted research entitled *Cost Benefit Analysis of the Enhanced Transportation Service Program*, dated June, 1997. He briefed various members of Marine Corps Logistics Bases, Albany, on his results and conclusions.

that an item, once selected, moves by premium transportation every time the retail-level supply organization submits a requisition to the wholesale-level supply source. Throughout this thesis, the terms " priority-less" and " premium" will be used interchangeably.

B. RESEARCH QUESTIONS

1. Primary

The wide-scale use of premium transportation is relatively expensive, but it provides the opportunity to reduce stockage levels due to the resulting decrease in OST. The primary research question is, " Is it beneficial to selectively use premium transportation to support I MEF at Camp Pendleton?"

2. Subsidiary

The subsidiary research questions target different elements of the primary research question to allow a systematic analysis of the central issues surrounding the use of premium transportation. The subsidiary research questions are,

1) What is the impact of premium air transportation between the Marine Corps Logistics Base at Albany and the Repairable Issue Point at Camp Pendleton?

2) What is the impact of premium air transportation between the New Cumberland/Mechanicsburg DLA Depot and the General Account at Camp Pendleton?

3) What is the impact, using the selected items in Question #2, of premium ground transportation between the Sharpe/Tracy DLA Depot and the General Account at Camp Pendleton?

4) Does the application of premium air/ground transportation make it beneficial to shift selected items that are primarily resupplied by the New Cumberland/Mechanicsburg DLA Depot to the Sharpe/Tracy DLA Depot?

5) What guidelines should be used in selecting items to move by premium transportation?

C. OUTLINE

Chapter I presents background material to explain the origins of this study in premium transportation. It also describes the primary and subsidiary research questions.

Chapter II: Background - Reviews the retail level and wholesale level supply. Explains this research's intended impact on OST and the use of simulation modeling.

Chapter III: The General Account - Reviews the requisition objective (RO) model and selection of items for analysis.

Chapter IV: The Repairable Issue Point - Reviews the requisition objective (RO) model and selection of items for analysis.

Chapter V: Simulation Methodology - Explains the methodology underlying the simulation models.

Chapter VI: Simulation Analysis - Explains the assumptions, limitations, and results of the simulation models.

Chapter VII: Conclusions and Recommendations - Draws conclusions based on the research questions and provides recommendations.

II. BACKGROUND

A. INTRODUCTION

Inventory and transportation are inextricably linked. They are each controlled by internal structures and factors, but their dependability and efficiency are ultimately a result of their relationship to each other.

This chapter discusses the inventory and transportation structures and factors relevant to this research. It also describes simulation modeling, a mathematical tool that can evaluate the interaction of these forces in different situations.

B. WHOLESALE LEVEL SUPPLY

Wholesale level supply is organized at the national level. It maintains, repairs, and procures inventory items to satisfy retail level demand (DoD 4140.1-R).

1. General characteristics of wholesale level supply (NAVSUP Pub 553)

a) Inventory levels are computed based on worldwide demand data.

b) Material is available for unrestricted use by the wholesale item manager.

c) The wholesale item manager knows (theoretically) where all stock is located.

d) Material is under the accountability of the designated inventory control point.

e) Material is " pushed" by the wholesale level to the retail intermediate level.

C. RETAIL LEVEL SUPPLY

Retail level supply is organized at DoD intermediate and consumer levels of supply directly below the wholesale level (DoD 4140.1-R).

1. General characteristics of retail intermediate level supply (NAVSUP Pub 553)

a) Requirements are computed based on historical demands arising in a geographical area or from designated activities.

b) Material is " pulled" from the wholesale system.

c) Each transaction concerning an item is reported to the wholesale level.

d) The stock is not usually available to satisfy demands outside the stock point's geographical area of support.

2. General characteristics of retail level supply (NAVSUP Pub 553)

a) The purpose is to provide direct support associated with readiness goals.

b) Computations are made to set up inventories via an allowance list. These allowance lists are established to meet operational readiness goals based on specific unit endurance goals.

c) Material is issued directly to the maintenance technician.

d) Inventories are not used to resupply another level of inventory.

e) The material is used by the activity in performing its function.

D. FUNCTIONS OF INVENTORY

Inventory exists to serve four functional factors (NAVSUP Pub 553). Thus, inventory levels will rise and fall based on changes to these factors.

1. Time Factor

Inventories exist because of the time required to produce and distribute an item to its final customer.

2. Decoupling Factor

Inventories exist to allow various operations (manufacturing, distribution, warehousing) to operate in an independent manner that will improve each operations' efficiency.

3. Uncertainty Factor

Inventories exist to meet variability both in demand and in resupply.

4. Economy Factor

Inventories exist to allow organizations to take advantage of the cost reductions available in economic order quantities, bulk shipments, etc.

E. ORDER SHIP TIME (OST)

OST is the total time between a customer supply requisition and the receipt of the supply item by the customer(DoD 4140.1-R). The routine use of premium transportation reduces average OST since most requisitions generally do not receive premium transport. This reduction in average OST leads to inventory reductions because it impacts both the time and uncertainty factors of inventory.

1. Reducing the inventory time factor

A reduced average OST means a shorter average lead time demand. Thus, inventory levels can reduce proportional to the reduction in average lead time demand.

2. Reducing the inventory uncertainty factor

The routine use of premium transportation will significantly reduce the uncertainty, or variability, associated with a distribution system that currently uses a host of transportation methods. Thus, premium transportation reduces the inventory levels (safety levels) that are held to counter transportation uncertainy.

F. SIMULATION MODELING

Simulation modeling is the use of computer capabilities to try and duplicate the behavior of a real system. It attempts to imitate a real system mathematically, study the resulting operating features, and then draw conclusions and courses of actions for the real system based on the simulation results. This section discusses the key advantages and disadvantages associated with simulation modeling (Production & Operations Management, 1996).

1. Simulation modeling advantages

a) It is relatively straightforward and flexible.

b) It can analyze large, complex situations that may be too difficult or expensive to otherwise analyze.

c) It can analyze virtually any probability distribution.

d) It can quickly analyze the impact of decisions over many months or years.

e) It answers " what-if" questions.

f) It does not interfere with the operations of the real system.

g) It can study the interactive effects of different variables and the system's sensitivity to them.

2. Simulation modeling disadvantages

a) It can be very expensive in time and money to build a comprehensive model.

b) It does not assist the analyst in deciding what input will yield an optimal solution.

c) Its results are only as good as the conditions and restraints entered by the analyst.

G. CONCLUSION

Inventory and transportation are dependent upon each other. Changes to one directly impact the other. This chapter described the factors influencing inventory and transportation. It also

described the key advantages and disadvantages of using simulation modeling to study their relationship to each other and to the system as a whole. The next chapter describes Camp Pendleton's General Account and its applicability to this research.

III. THE GENERAL ACCOUNT

A. INTRODUCTION

DoD 4140.1-R (DoD Material Management Regulation) provides DoD policy concerning retail level inventory. It allows material retention below the wholesale level. Retail activities may retain materials to support war reserve levels, to satisfy 24 month's worth of excess at anticipated wear out rates, and to support the requisitioning objective. This research studies the impact of premium transportation on the requisitioning objective and the resulting decrease in inventory costs.

This chapter describes the requisitioning objective in use at Camp Pendleton's General Account. It also explains the method used to identify which items will be used in this research.

B. THE REQUISITIONING OBJECTIVE

The current requisitioning objective used at Camp Pendleton's General Account consists of the following categories:[4]

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[4] Chief Warrant Officer Charles Coon, SASSY Management Unit (SMU), Camp Pendleton, California, outlined the requisitioning objective for the General Account's on-hand inventory of consumable items.

1. Minimum Requirements Analysis

Items must meet two conditions before their requisitioning objective can exceed zero. These conditions are 1) a minimum of three requisitions in three separate months over the last twelve month period, and 2) one of the three requisitions must have occurred in the last four months.

2. Order Ship Time

The average order ship time is represented by the following equation:

$$\text{Average OST} = (\text{COST} / \text{TOY}) \qquad (3.1)$$

where

OST = Order Ship Time (Days)

COST = Cumulative Order Ship Time (Days)

TOY = Total Orders in Year (Units)

Cumulative Order Ship Time is the total of the individual OSTs for each item ordered during the last twelve months.

Total Orders in Year is the number of items ordered during the last twelve months.

The average OST is rounded to the next highest increment of 5 (e.g., average OST between 1 and 5 is rounded to 5). An average OST of 45 days will be used when items 1) have an average

OST of 0 or, 2) are in their first two years of use or, 3) have fewer than five requisitions in the previous twelve months.

3. Safety Level

The safety level is the quantity of items needed to compensate for variability. Items with a Combat Essentiality Code of 5 or 6 use a 30 day safety level. All other items use a 15 day safety level.

4. Operating Level

The operating level is the quantity of items needed between replenishment cycles. Operating level time is the time between replenishment orders based on an economic order quantity (Naval Audit Service Report, 1996). All items use a 60 day operating level.

5. Combine Requirements

The final requisitioning objective is represented by the following equation:

RO = [(Average OST + SL + OL)/30 days] X AMRD (3.2)

where

RO = Requisitioning Objective (Units)

OST = Order Ship Time (Days)

SL = Safety Level (Days)

OL = Operating Level (Days)

AMRD = Average Monthly Recurring Demand (Units/Month)

Average Monthly Recurring Demand is the average of the last twelve monthly demand rates. AMRD is rounded to the next whole number.

C. SELECTION OF ITEMS FOR ANALYSIS

This research uses 83 consumable items.[5] Shipping data from Camp Pendleton originally identified 12,317 items that East Coast depots generally supported. Further shipping data research concluded that East Coast depots exclusively supplied only 8,158 of these items, while the New Cumberland/Mechanicsburg depot exclusively supported only 951 of these items. Freight files, provided by Camp Pendleton, provided weight and dimensional information on 328 of these remaining items. The final items emerged after comparing the 328 items against the historical data received from the Rand Corporation, Camp Pendleton, and Albany. Only 83 items actually indicated usage in all three data sets.

D. CONCLUSION

The key to this research is using an accurate requisitioning objective and meaningful data. This chapter described how to

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[5] Major Doug Turlip and Chief Warrant Officer Charles Coon; SMU, Camp Pendleton; ran data queries against Camp Pendleton's demand and shipping records to identify the items described above.

correctly use the requisitioning objective and how to identify items that support this research. The next chapter describes Camp Pendleton's Repairable Issue Point and its applicability to this research.

IV. THE REPAIRABLE ISSUE POINT

A. INTRODUCTION

DoD 4140.1-R (DoD Material Management Regulation) provides DoD policy concerning retail level inventory. It allows material retention below the wholesale level. Retail activities may retain materials to support war reserve levels, to satisfy 24 month's worth of excess at anticipated wear out rates, and to support the requisitioning objective. This research studies the impact of premium transportation on the requisitioning objective and the resulting decrease in inventory costs.

This chapter describes the requisitioning objective in use at Camp Pendleton's Repairable Issue Point. It also explains the method used to identify which items will be used in this research.

B. THE REQUISITIONING OBJECTIVE

The current requisitioning objective used at Camp Pendleton's repairable issue point consists of the following categories:[6]

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[6]Lieutenant Colonel Jerry Calleros and Major Doug Turlip; both from the SMU, Camp Pendleton; outlined the current requisitioning objective for the Repairable Issue Point's on-hand inventory of repairable items.

1. Minimum Requirements Analysis

There are no minimum requirements for establishing a requisitioning objective quantity.

2. Repair Cycle Requirement

The repair cycle requirement is the average monthly number of units being locally repaired. It is represented by the following equation:

$$RCR = (RR \times RCT) / 30 \text{ days} \qquad (4.1)$$

where

RCR = Repair Cycle Requirement (Units)

RR = Repair Rate (Units/Month)

RCT = Repair Cycle Time (Days)

" Repair Rate is the number of an item returned per month (to the RIP) by the supporting maintenance facility, repaired and ready for use" (Naval Audit Service, 1996).

" Repair Cycle Time is the average time in days required to repair an item" (NAS, 1996).

3. Order and Shipping Requirement

The order and shipping requirement is the average monthly number of units on order. It is represented by the following equation:

$$OSR = [(MFR-RR) \times OST] / 30 \text{ days} \qquad (4.2)$$

where

OSR = Order and Shipping Requirement (Units)

MFR = Maintenance Failure Rate (Units/Month)

RR = Repair Rate (Units/Month)

OST = Order Ship Time (Days)

" Maintenance Failure Rate is the number of requests RIPs receive per month for replacement repairables (i.e., a unit turns in a broken item and requests a replacement)" (NAS, 1996).

" Order Ship Time is the average time in days it takes the RIP to order and receive replenishment items from the supply source" (NAS, 1996).

4. Safety Level

The safety level is the number of units needed to compensate for variability. It is represented by the following equation:

$$SL = RCR + OSR \qquad (4.3)$$

where

SL = Safety Level (Units)

RCR = Repair Cycle Requirement (Units)

OSR = Order and Shipping Requirement (Units)

5. Combine Requirements

The final requisition objective is the sum of the repair cycle requirement, order and shipping requirement, and the safety level. It is represented by the following equation:

$$RO = RCR + OSR + SL \quad (4.4)$$

where

RO = Requisitioning Objective (Units)

RCR = Repair Cycle Requirement (Units)

OSR = Order and Shipping Requirement (Units)

SL = Safety Level (Units)

C. SELECTION OF ITEMS FOR ANALYSIS

This research uses 52 repairable items. The original pool of items began with 156 items carried by Camp Pendleton with a Supply Source Code of MPB (Marine Corps Logistics Bases). This means that Albany, Georgia and Barstow, California typically provide these items to Camp Pendleton. Individual item requisitions which indicate Barstow as the final storage depot will be removed from this analysis in order to isolate the logistical interaction between Camp Pendleton and Albany. Freight files, provided by Camp Pendleton, provided weight and dimensional information on 88 of the original 156 items. The final items emerged after comparing the 88 items against the

historical data received from the Rand Corporation, Camp Pendleton, and Albany. Only 52 items actually indicated usage in all three data sets.

D. CONCLUSION

The key to this research is using an accurate requisitioning objective and meaningful data. This chapter described how to correctly use the requisitioning objective and how to identify items that support this research. The next chapter presents the General Account and Repairable Issue Point's requisitioning objectives in a spreadsheet format. It also explains how this spreadsheet interacts with the simulation model.

V. SIMULATION METHODOLOGY

A. INTRODUCTION

This research uses a simulation software program called *Crystal Ball* to study the interaction between premium transportation costs and inventory holding costs. It simulates the future by assigning maintenance failure rates (MFRs), repair cycle times (RCTs), repair rates (RRs), and OSTs based on probability distributions. It defines these distributions by analyzing 18 months of historical rates and times.[7] This chapter discusses the methodology underlying the simulated premium transportation and inventory scenarios.

B. ALBANY AND CAMP PENDLETON

1. Scenario Description

This simulation scenario studies repairable item support from Albany to Camp Pendleton. It assumes that all requisitions for these items receive premium air transportation. The only

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[7] Marc Robbins, RAND, provided data on consumable and repairable OSTs and transit times based on the end-user as the customer. Major Doug Turlip and Chief Warrant Officer Charles Coon, SMU, Camp Pendleton, provided data on consumable OSTs based on the SMU as the customer. Captain Mike Lepson and Mike Carroll, MarCorLogBases, Albany, provided data on ERO-related consumable and repairable MFRs, RCTs, RRs, and OSTs based on the end-user as the customer.

segment of OST affected is transit time. The other segments remain unchanged throughout this simulation.

2. Item Description

This simulation used 52 repairable items. See Appendix A - Repairable Descriptions. Identifying characteristics of these items include the National Stock Number (NSN), nomenclature, Source of Supply (SoS), price, weight, cube, length, width, and height. The NSN is the primary means used by the Department of Defense to track individual items. The SoS is the organization and location that decides which supply or storage depot will fill an item requisition. SoS is equivalent to the Inventory Control Point (ICP), the Integrated Material Manager (IMM), and the Last Known Holder (LKH).[8] The remaining terms are self-explanatory.

3. RO Equation

The RO equation is at the very heart of the simulation scenario. It provides a means to determine how inventory levels change when premium transportation reduces the OST. The RO equation for repairable items is described in Chapter IV. The equation variables include the MFR, RR, RCT, and OST. *Crystal Ball* builds probability distributions based on the historical

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[8] Major Doug Turlip, SMU, Camp Pendleton, described the various depot functions during a series of telephone and email conversations.

values of these variables. The MFR, RR, and RCT distributions are the same for both the ground and premium transportation simulations. The OST distributions are different because the transit time element of the OST is different. *Crystal Ball*'s simulated values for these variables is a product of their probability distributions. This section describes these variables as they are used in the simulation. See Appendix A - Repairable RO Equation.

The MFR is represented by the quantity of Equipment Repair Orders (EROs) opened each month for each item. See Appendix A - MFR Data. The MFR used in the RO equation is found by taking the average of twelve consecutive monthly MFRs. The simulations build a probability distribution around seven of these twelve-month average MFRs.

The RR is represented by the quantity of Equipment Repair Orders (EROs) closed each month for each item. See Appendix A - RR Data. The RR used in the RO equation is found by taking the average of twelve consecutive monthly RRs. The simulation builds a probability distribution around seven of these twelve-month average MFRs.

The RCT is represented by the amount of time between opening and closing an ERO for an item. See Appendix A - RCT Data. The

RCT used in the RO equation is found by first taking a specific item, looking at each ERO that closed during the month in question, and adding all the times between opening and closing the EROs. This total time is then divided by the total number of items that closed their EROs during the month. Finally, the average is found of twelve consecutive monthly RCTs. The simulation builds a probability distribution around seven of these twelve-month average RCTs.

The OST is represented by the amount of time between the customer's order and receipt. See Appendix A - OST Data. The OST used in the RO equation for ground transportation is the average OST described above. The OST used in the RO equation for premium transportation assumes that transit time is only one day. The simulation builds a probability distribution around all the individual OSTs recorded for each item in the last 18 months.

4. Inventory Holding Costs

Reducing inventory levels can have long-term financial benefits long after the short-term benefits of inventory capital reductions. Some of the long-term benefits include reduced warehouse space, personnel requirements, and utility costs. This simulation strictly looks at the long-term benefits since they

represent continuous and ongoing savings over time. See Appendix A - Inventory Savings.

The *Cost to Order/Hold Study For Intermediate Level Activities,* conducted in June 1988 at MarCorLogBases, attempted to isolate quantifiable factors that determine the long-term financial benefits of inventory reductions. These factors are percentages of the inventory value. For example, a factor of 10% applied against a $100 inventory reduction means that the organization's annual costs will decrease by $10. The study isolated four factors. They are as follows:

a) 1.00% - storage costs.

b) 1.04% - obsolescence and forecast error costs.

c) 9.04% - other inventory holding costs.

d) 10.00% - capital investment costs.

The simulation model applies these factors to the inventory reductions that are realized through the use of premium transportation.

5. Transportation Costs

Increasing premium transportation has an immediate impact by reducing OSTs. These OST reductions mean lower lead time demand and thus lower inventory levels. However, these benefits come at

a cost. This simulation uses both " ground" less-than-truckload (LTL) rates and " premium" next-day air rates. See Appendix A - Transportation Costs.[9]

C. NEW CUMBERLAND/MECHANICSBURG AND CAMP PENDLETON

1. Scenario Description

This simulation scenario studies consumable item support from New Cumberland/Mechanicsburg to Camp Pendleton. It assumes that all requisitions for these items receive premium air transportation. The only segment of OST effected is transit time. The other segments remain unchanged throughout this simulation.

2. Item Description

This simulation used 83 consumable items. See Appendix B - Consumable Descriptions. Identifying characteristics of these items include the National Stock Number (NSN), nomenclature, Combat Essentiality Code (CEC), Source of Supply (SoS), Storage Depot (SD), city (of SD), state (of SD), price, weight, cube, length, width, and height.

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[9] Lee Lumpkin, Transportation Supervisor at MarCorLogBases, provided FedEx rates (<150 lbs) and Emery WorldWide rates (>150 lbs) on September 4, 1997. Bob Shaver, Freight Supervisor at MarCorLogBases, provided LTL rates on November 13, 1997.

3. RO Equation

The RO equation is at the very heart of the simulation scenario. It provides a means to determine how inventory levels change when premium transportation reduces the OST. The RO equation for consumable items is described in Chapter III. The equation variables include the Average Monthly Recurring Demand (AMRD) and OST. *Crystal Ball* builds probability distributions based on the historical values of these variables. The AMRD distributions are the same for both the ground and premium transportation simulations. The OST distributions are different because the transit time element of the OST is different. *Crystal Ball*'s simulated values for these variables is a product of their probability distributions. This section describes these variables as they are used in the simulation. See Appendix B - Consumable RO Equation.

The AMRD is represented by the total quantity of items requested each month for each item. See Appendix B - AMRD Data. The AMRD used in the RO equation is found by taking the average of twelve consecutive monthly AMRDs. The simulations build a probability distribution around seven of these twelve-month average AMRDs.

The OST is represented by the amount of time between the customer's order and receipt. See Appendix B - OST Data. The OST used in the RO equation for ground transportation is the average OST described above. The OST used in the RO equation for premium transportation assumes that transit time is only one day. The simulation builds a probability distribution around all the individual OSTs recorded for each item in the last 18 months.

4. Inventory Holding Costs

This material is discussed in detail in the Albany to Camp Pendleton " Inventory Holding Costs" section. The information is equally applicable to both simulations. Specific information concerning this simulation is located in Appendix B - Inventory Savings.

5. Transportation Costs

Increasing premium transportation has an immediate impact by reducing OSTs. These OST reductions mean lower lead time demand and thus lower inventory levels. The reduced inventories, in turn, mean lower storage costs. These benefits, however, come at the cost of increased transportation fees. This simulation uses both " ground" less-than-truckload (LTL) rates and " premium"

next-day air rates in the analysis of these fees. See Appendix B - Transportation Costs.[10]

D. SHARPE/TRACY AND CAMP PENDLETON

1. Scenario Description

This simulation scenario studies the ***shift*** of consumable item support, needed by Camp Pendleton, from New Cumberland/Mechanicsburg to Sharpe/Tracy. It assumes that all requisitions for these items utilize Sharpe/Tracy's current same-day, three-deliveries-a-week premium ground transportation service to Camp Pendleton. The only segment of OST effected is transit time. The other segments remain unchanged throughout this simulation.

2. Item Description

This simulation used 83 consumable items. See Appendix C - Consumable Descriptions. Identifying characteristics of these items include the National Stock Number (NSN), nomenclature, Combat Essentiality Code (CEC), Source of Supply (SoS), Storage

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[10] Lee Lumpkin, Transportation Supervisor at MarCorLogBases, provided FedEx rates (<150 lbs) and Emery WorldWide rates (>150 lbs) on September 4, 1997. Patricia Kuntz, Transportation Supervisor at the Defense Distribution Depot, New Cumberland, provided LTL rates on November 13, 1997.

Depot (SD), city (of SD), state (of SD), price, weight, cube, length, width, and height.

3. RO Equation

The RO equation is at the very heart of the simulation scenario. It provides a means to determine how inventory levels change when premium transportation reduces the OST. The RO equation for consumable items is described in Chapter III. The equation variables include the Average Monthly Recurring Demand (AMRD) and OST. *Crystal Ball* builds probability distributions based on the historical values of these variables. The AMRD distributions are the same for both the ground and premium transportation simulations. The OST distributions are different because the transit time element of the OST is different. *Crystal Ball*'s simulated values for these variables is a product of their probability distributions. This section describes these variables as they are used in the simulation. See Appendix C - Consumable RO Equation.

The AMRD is represented by the total quantity of items requested each month for each item. See Appendix C - AMRD Data. The AMRD used in the RO equation is found by taking the average of twelve consecutive monthly AMRDs. The simulations build a

probability distribution around seven of these twelve-month average AMRDs.

The OST is represented by the amount of time between the customer's order and receipt. See Appendix C - OST Data. The OST used in the RO equation for ground transportation is the average OST described above. The OST used in the RO equation for premium transportation assumes that transit time is only one day. The simulation builds a probability distribution around all the individual OSTs recorded for each item in the last 18 months.

4. Inventory Holding Costs

This material is discussed in detail in the Albany to Camp Pendleton " Inventory Holding Costs" section. The information is equally applicable to both simulations. Specific information concerning this simulation is located in Appendix C - Inventory Savings.

5. Transportation Costs

Increasing premium transportation has an immediate impact by reducing OSTs. These OST reductions mean lower lead time demand and thus lower inventory levels. However, these benefits usually come at a cost.

Sharpe/Tracy is currently delivering items to Camp Pendleton using a same-day, three-deliveries-a-week service at no cost to

the Marine Corps. Darlene Granados, Transportation Supervisor at the Defense Distribution Depot, Sharpe/Tracy, provided historical data and usage rates on the delivery service on September 23, 1997. This service, funded by the Defense Logistics Agency (DLA), provides three deliveries to Camp Pendleton a week. The delivery vehicle varies between 40', 45', and 52' trucks. DLA will provide this service at no cost to the Marine Corps as long as the vehicles, on average, utilize a minimum of 50% of their weight or cubic capacity. The current service is operating at approximately 49% capacity. Darlene Granados stated that DLA is willing to increase this service to five-days-a-week, but only if the vehicles can be filled to 50% capacity or more.

This simulation focuses on the available capacity in the current three-deliveries-a-week service. The simulation studies the impact of repositioning the consumable items and, consequently, shifting from New Cumberland/Mechanicsburg " ground" LTL rates to the Sharpe/Tracy premium service. See Appendix C - Transportation Costs.

E. CONCLUSION

This chapter explained the methodology underlying the simulated premium transportation support from the New Cumberland/Mechanicsburg depot, the Sharpe/Tracy depot, and

the Marine Corps Logistics Bases, Albany. The simulation models used in this research are an inexpensive, risk-free method of studying the interaction between premium transportation costs and inventory holding costs. These models are conservative in their assumptions and overall design. As a result, their output will tend toward higher transportation costs, lower inventory savings, and an unfavorable tradeoff value. Although these tendencies are minimal, they exist and should be considered when reviewing the models' outputs. The key to eliminating these tendencies is increasing the amount and accuracy of the data used within the models. The next chapter will discuss the assumptions, limitations, and results of the simulation models.

VI. SIMULATION ANALYSIS

A. INTRODUCTION

A simulation model is limited in its ability to imitate the tremendous variety of factors that influence how an actual system functions. This section discusses the key assumptions and limitations that form the foundation of this research's simulation models and their applicability to the actual Marine Corps' logistics process. It also describes the simulation models' results.

B. ASSUMPTIONS

There are a variety of assumptions made throughout this research due to inadequate data, time constraints, or *Crystal Ball* data requirements. These assumptions include:

1) The requisitioning objectives' safety level factors remain constant during the use of premium transportation.

2) The 1988 inventory holding cost factors reflect actual costs of holding inventory at Camp Pendleton.

3) The " washout rate" (MFR-RR) and the AMRD represent the total wholesale shipping requirement for the items in this analysis.

4) Each consumable item is shipped to Camp Pendleton in two shipments each month. Historical data indicated that the storage depot ships items multiple times, in different quantities, and at different times each month. This research's simulation models do not have the analytical depth to simulate daily shipping patterns.

5) None of the items require outsized cargo transportation rates.

6) DLA pays all ground shipping costs, while the Marine Corps pays the difference between premium and ground shipping costs. DLA currently pays all shipping costs, only using premium transportation to meet high priority requisitions that DLA believes require premium transportation. This assumption effectively saves DLA money by enabling it to always pay ground shipping rates.

7) The following repairable item data represents the entire transaction history of the items during the last 18 months:

a) ERO open and close dates, provided by Albany.

b) Item order and receipt dates, provided by Rand.

c) Item ground transit times, provided by Rand.

8) The following consumable item data represents the entire transaction history of the items during the last 18 months:

a) Item order and receipt dates, provided by I MEF.

b) Item ground transit times, provided by Rand.

C. LIMITATIONS

The simulation models have a variety of limitations, many of which are linked to the above assumptions. These limitation include:

1) Only 18 months of data was used because " Precision Logistics" initiatives designed to decrease OST began at that time at Camp Pendleton. Data prior to this period would not reflect the the impact of these initiatives on OST.

2) Using 52 repairable and 83 consumable items does not provide a truly representative sample of Camp Pendleton's inventories. Data and computer constraints limited the analysis to these quantities.

3) The simulation models do not analyze safety levels. The use of premium transportation dramatically reduces the variability connected with current transportation times. This reduction in variability implies the requisitioning objectives can utilize smaller safety levels.

4) The *Cost to Order/Hold Study For Intermediate Level Activities,* conducted in 1988 at MarCorLogBases, provides

questionable inventory holding cost factors because of the study's age.

5) The consumable items use AMRDs that only account for supply replenishment actions initiated at the SMU level. The AMRDs do not account for requisitions that originate below the SMU and are simply passed to the wholesale level for action.

6) There was no data available concerning which specific items were shipped together from the same storage depots. Although the simulation models shipped repairable items individually and consumable items in two batched shipments each month, this method is only an approximation of the transportation cost savings associated with shipping larger batches at reduced rates.

7) Repairable Data

a) The repairable order and receipt dates, provided by Rand, represent the dates the using unit actually ordered and receipted for the item. The requisitioning objectives in use at the SMU use the dates the SMU ordered and receipted for the item. This difference can be a day, a week, or more at each end of OST.

b) The repairable ground transit times, provided by Rand, represent the dates the storage depot shipped the item until the using unit receipted for it. Again, the SMU's

requisitioning objectives use the SMU's receipt date. This possibly adds several days to the OST.

c) The most critical element of the SMU and using unit date differences is the increase in OST variability. The simulation models cannot isolate and remove the variability specifically associated with the using unit and SMU interactions.

8) Consumable Data

a) The consumable ground transit times, provided by Rand, represent the dates the storage depot shipped the item until the using unit receipted for it. Since the SMU's requisitioning objectives use the SMU's receipt date, this possibly adds several days to the OST. The simulation models cannot isolate and remove the variability associated with the using unit and SMU's different receipt dates.

D. RESULTS

The simulation results indicate the probabilities of attaining certain monthly inventory/transportation tradeoff values. The mean tradeoff value is the average of all the tradeoff values based on the number of iterations run by the simulation model. The mean tradeoff value represents the average monthly gain or loss to I MEF if it uses premium transportation to resupply the items studied in this research. The gain

percentage is the probability that the monthly tradeoff value will equal or exceed zero. The gain percentage represents the percentage of time that I MEF will experience a monthly gain while using premium transportation to resupply the items studied in this research.

1. Albany to Camp Pendleton

Figure 1 shows that premium transportation for the 52 repairable items used in this research yields a mean tradeoff value of -$2,527.81, i.e., on average, I MEF would lose this much money each month the program is used.

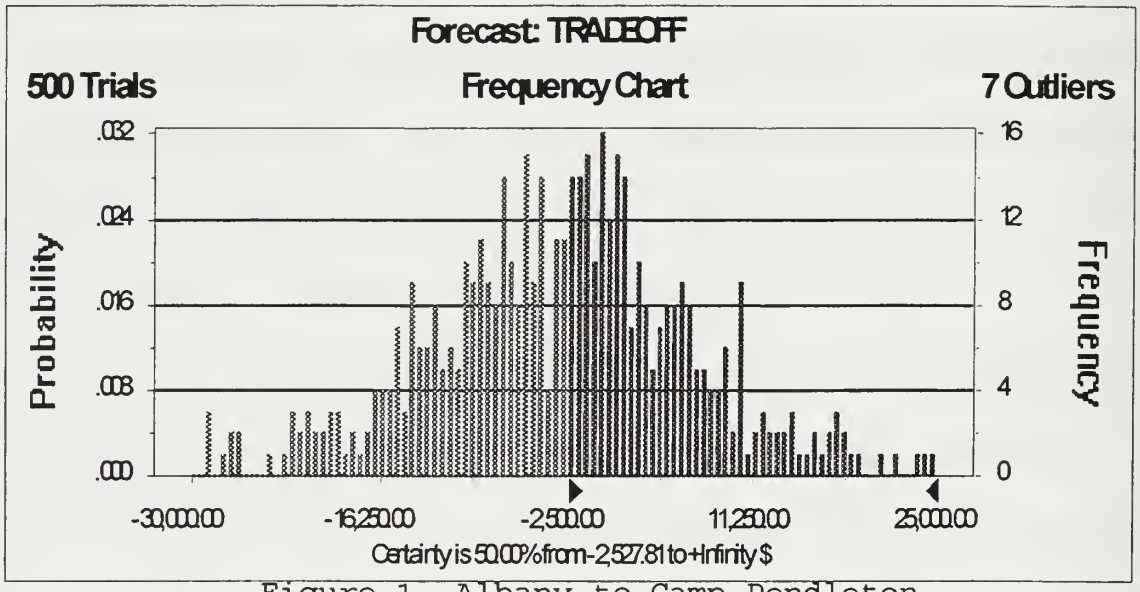

Figure 1. Albany to Camp Pendleton

Figure 2 shows that premium transportation between Albany and Camp Pendleton, for the 52 repairable items used in this research, yields a gain percentage of 37.40%, i.e., I MEF would not lose money in about one third of the months the program is used.

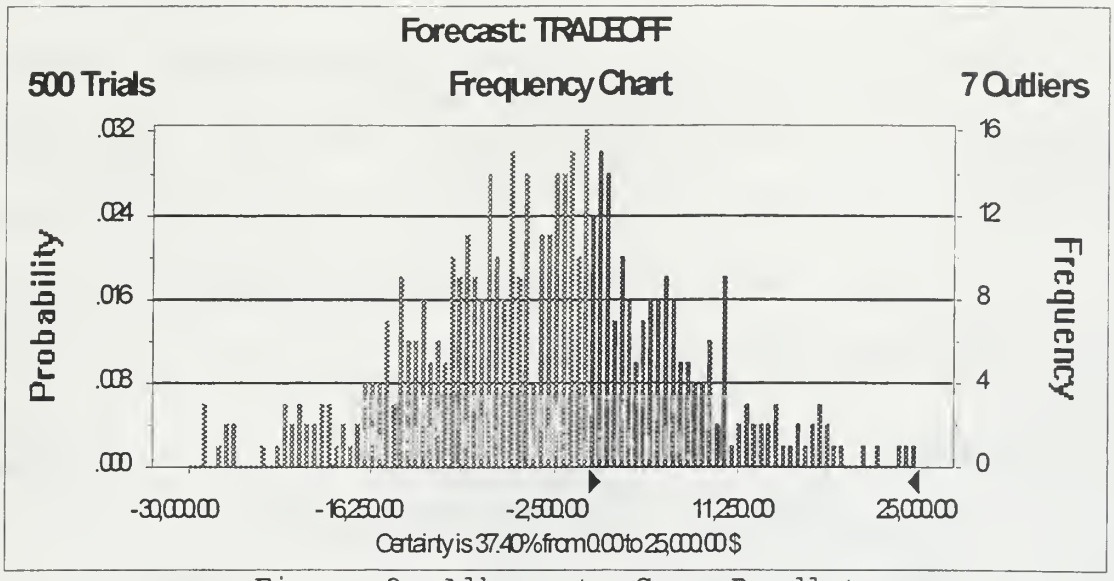

Figure 2. Albany to Camp Pendleton

2. New Cumberland/Mechanicsburg to Camp Pendleton

Figure 3 shows that premium transportation for the 83 consumable items used in this research yields a mean tradeoff value of -$404.46, i.e., on average, I MEF would lose this much money each month the program is used.

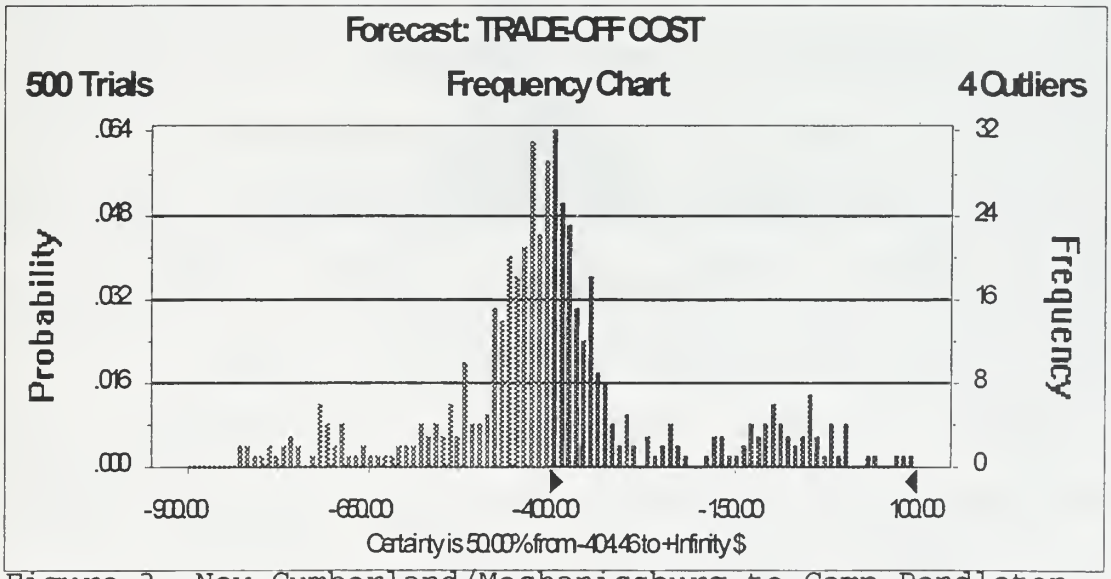

Figure 3. New Cumberland/Mechanicsburg to Camp Pendleton

Figure 4 shows that premium transportation between New Cumberland/Mechanicsburg and Camp Pendleton, for the 83 consumable items used in this research, yields a gain percentage of 2.60%, i.e., I MEF would not lose money about one month in every four years the program is used.

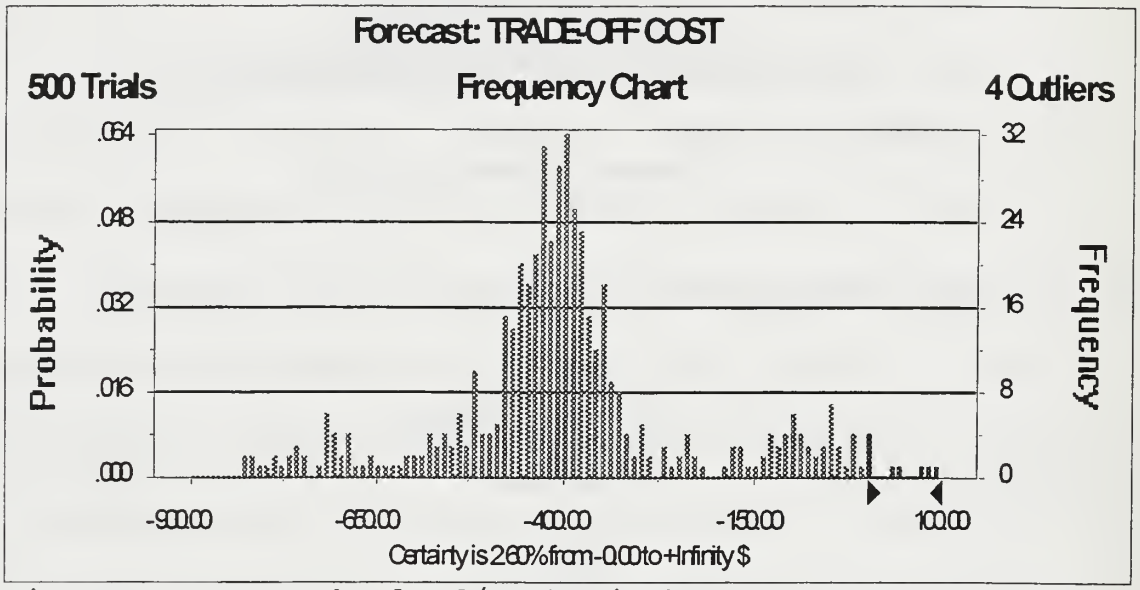

Figure 4. New Cumberland/Mechanicsburg to Camp Pendleton

3. Sharpe/Tracy to Camp Pendleton

Figure 5 shows that premium transportation for the 83 consumable items used in this research yields a mean tradeoff value of $161.82, i.e., on average, I MEF would gain this much money each month the program is used.

Figure 6 shows that premium transportation between Sharpe/Tracy and Camp Pendleton, for the 83 consumable items used in this research, yields a gain percentage of 90.60%, i.e., I MEF would not lose money over 90% of the time the program is used.

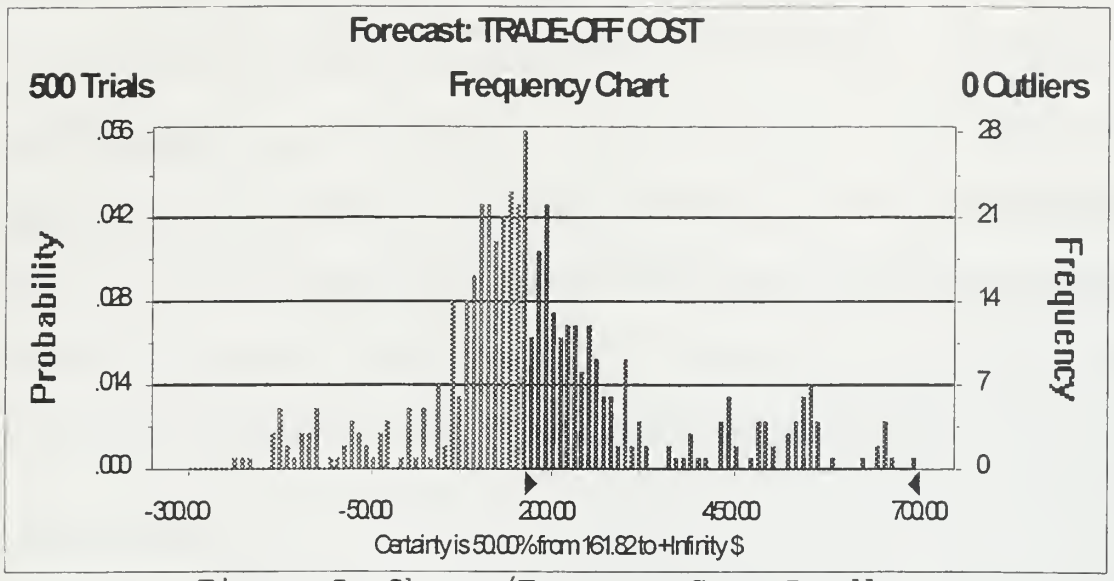

Figure 5. Sharpe/Tracy to Camp Pendleton

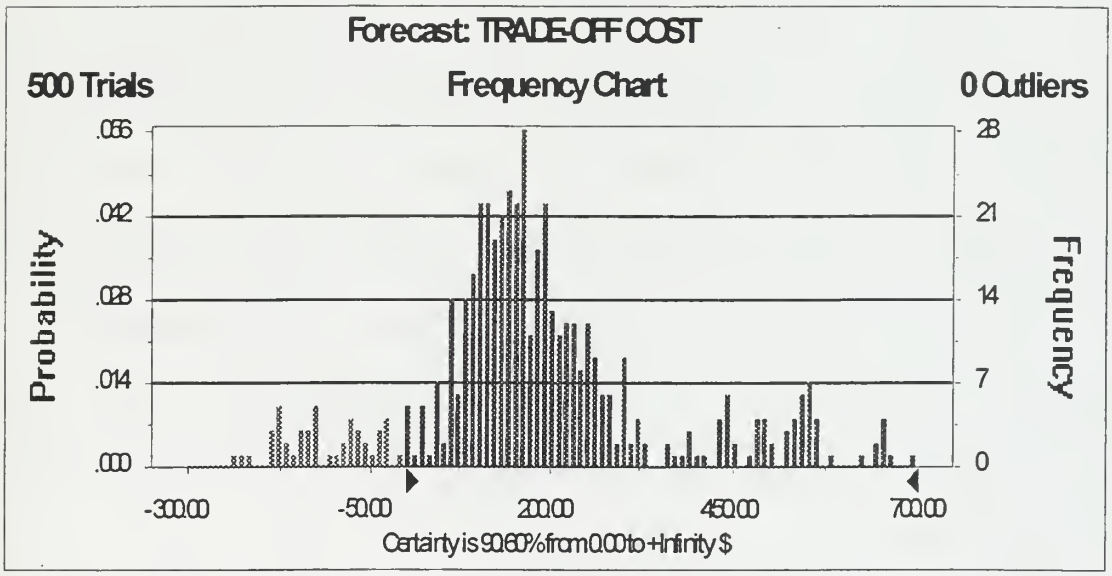

Figure 6. Sharpe/Tracy to Camp Pendleton

E. CONCLUSION

These simulation models have many assumptions and limitations because they simulate the interaction between a large retail supply organization and multiple wholesale supply

organizations. Although these assumptions and limitations establish a foundation for information that may be vague or open to individual interpretation, analysis of the results from the simulation models yields several important conclusions and recommendations presented in the next chapter.

VII. CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

This research covered a wide spectrum of issues concerning inventory, transportation, retail demand, and wholesale supply. This chapter discusses these issues by drawing conclusions based on the research questions and providing recommendations.

B. CONCLUSIONS

It is important to reemphasize that the term "premium" transportation in this thesis means the "priority-less" use of premium transportation. This means that an item, once selected, moves by premium transportation every time the retail-level supply organization submits a requisition to the wholesale-level supply source. It is also important to recognize that the simulation results in this thesis represent only one point on the cost tradeoff probability distribution for each simulation. The key is looking at the overall distributions for meaning, not at any one specific value.

1. It is beneficial to selectively use premium transportation to support I MEF at Camp Pendleton.

The simulation analysis revealed that premium resupply of consumable items can yield significant benefits in reduced OSTs, '

inventory levels, and total costs. One example is the use of premium transportation to significantly reduce New Cumberland/Mechanicsburg's OSTs while incurring an additional average cost of only $400 per month. Another example is Sharpe/Tracy's unused premium transportation capacity which is available at no cost to I MEF. Repairable item resupply does not appear to support the use of premium transportation because of the high weight, and thus high transportation cost, of many repairable items.

2. **Premium air transportation between MarCorLogBases at Albany and Camp Pendleton, for the operational resupply of repairable items, results in significant additional costs that are not justified by the reduced OSTs and inventory levels.**

Premium transportation of 52 repairable items yielded a monthly mean tradeoff value of -$2,527.81, while reaching a positive gain 37% of the time. Premium transportation is therefore not recommended in this scenario. See Appendix A - Repairable Tradeoff.

3. **Premium air transportation between New Cumberland/Mechanicsburg and Camp Pendleton, for the operational resupply of consumable items that are so mission critical that they warrant an additional command-specified expense, is justified by the reduced OSTs and inventory levels.**

This expense can be estimated using this thesis' simulation model so the commander can weigh mission concerns against

budgetary impact before making a decision. Premium transportation of 83 consumable items yielded a monthly mean tradeoff value of -$404.46, while reaching a positive gain 3% of the time. Premium transportation is therefore recommended in this scenario. See Appendix B - Consumable Tradeoff.

4. **Premium ground transportation between Sharpe/Tracy and Camp Pendleton, for the operational resupply of consumable items that are located in a depot that uses dedicated trucking with excess capacity for resupply, is justified by the reduced OSTs and inventory levels.**

Premium transportation of 83 consumable items yielded a monthly mean tradeoff value of $161.82, while reaching a positive gain 91% of the time. Premium transportation is therefore recommended in this scenario. See Appendix C - Consumable Tradeoff.

5. **It is beneficial to shift selected items that are primarily resupplied by New Cumberland/Mechanicsburg to Sharpe/Tracy.**

However, this simulation analysis only touched on a few of the many factors that need consideration before taking action. Other factors include the location of the consumable items' suppliers, the costs to ship from the supplier locations to Sharpe/Tracy, and the economic and political impact of using different suppliers that are closer to Sharpe/Tracy.

6. **Only certain types of consumable items are compatible with the use of a premium transportation service.**

These types include consumable items that 1) are so mission critical that they warrant an additional command-specified expense, or 2) are located in depots that use dedicated trucking with excess capacity for resupply.

7. **Historical requisition data from the Rand Corporation, I MEF, and MarCorLogBases varies significantly.**

Given a specific item over a specific period of time, these organizations' databases yield different order and receipt dates, different quantities ordered, and different total orders placed. This means that different organizations at the retail and wholesale supply levels get different answers when they ask the same logistical questions.

8. **Retail and wholesale level supply organizations do not use the same terminology when discussing issues that directly impact the other.**

One example of this is the wholesale level use of SoS to mean the storage depot, while the retail level uses SoS to mean the inventory control point. This inconsistency is important because these organizations freely use the term SoS when they discuss, analyze, and produce reports on logistics processes. For example, a transit time report that lists SoS (when it means the storage depot) will represent true transit times, while the

same report that lists SoS (when it means the inventory control point) will create the illusion that only one or two depots ship the item and that they have far more transit time variability than they actually do.

9. Wholesale level supply organizations often focus on the segments of OST that they cannot directly influence and change.

Wholesale level data tended to use using unit order and receipt dates, with little focus on the point in time when the item actually enters and leaves the wholesale system. This point in time generally occurs at the SMU for Camp Pendleton, except when storage depots fill requisitions by shipping directly to the using unit. The wholesale level should focus on the OST time from the SMU's order date to the SMU's receipt date. I MEF should focus on the internal retail issues that exist below the SMU's level.

C. RECOMMENDATIONS

The simulation models' results must be studied with the understanding that multiple organizations provided data that occasionally contradicted itself. The recommendations target the data sources and their degree of data reliability.

1. **Rerun the simulation models in this thesis using SMU order, depot ship, and SMU receipt dates that the SMU provides from its databases.**

This approach will eliminate many of the core assumptions and limitations of this research's models. This approach could also be applied to numerous studies between various depots involving both consumable and repairable items.

2. **Conduct a detailed analysis of the issues involved in moving items from New Cumberland/Mechanicsburg to Sharpe/Tracy.**

Only further research concerning issues such as the location of the consumable items' suppliers, the costs to ship from the supplier locations to Sharpe/Tracy, and the economic and political impact of using different suppliers that are closer to Sharpe/Tracy will provide a definitive answer concerning the benefits of such a move.

3. **Cross-reference the history of a collection of requisitions against the Rand, I MEF, and MarCorLogBases databases to determine the degree of data consistency.**

This analysis will then allow a focused investigation of the data retrieval, transfer, and storage methods of these organizations to determine why the data are not the same.

4. **Ensure that retail and wholesale level supply organizations explain exactly what they mean when exchanging time segment dates and depot names in regards to OST.**

Conducting research or checking on the status of current requisitions, based on OST information tranferred between the retail and wholesale levels of supply, yields few meaningful results if the information is not interpreted correctly.

5. **Focus wholesale level supply organizations on the segments of OST that they can directly influence and change.**

The OST time segment most relevant to the wholesale level begins with the SMU's order date and ends with the SMU's receipt date.

D. SUMMARY

Retail and wholesale level supply must function as an integrated unit to provide optimal logistics response times to the using units--the Marine Corps warfighters. This research identified two ways to improve this support.

One way to improve this support is to use premium transportation to reduce OST and inventory. This is applicable for consumable items that 1) are so mission critical that they warrant an additional command-specified expense, or 2) are located in depots that use dedicated trucking with excess

capacity for resupply. A second way is to focus on inconsistencies that exist between the two levels of supply. These inconsistencies include database management, terminology usage, and OST focus.

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MSG FM CMC WASHINGTON DC//L// DTG 150245Z NOV 96, *Precision Logistics: Reducing Order Ship Time (OST).*

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APPENDIX A - REPAIRABLE DESCRIPTIONS

ITEM NO	NSN	NOMENCLATURE	SOS	PRICE ($)	WEIGHT (LBS)	CUBE (FT)	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)
1	1005011643558	RECEIVER,C	MPB	37.26	7.0000	0.0260	5	3	3
2	1005012148884	RECEIVER,C	MPB	600.00	1.0000	0.0625	9	4	3
3	1010012579961	WEAPON CON	MPB	2659.38	3.3800	0.7200	1	1	1
4	1010012579962	TURRET POW	MPB	2388.17	2.5000	0.3100	1	1	1
5	1010012589660	RELAY UNIT	MPB	4516.31	16.0000	0.4750	1	1	1
6	1010012589661	TRAVERSE M	MPB	10925.00	0.8900	0.2100	1	1	1
7	1015011656212	TUBE ASSEM	MPB	2787.63	31.0000	1.9000	1	1	1
8	1240010380531	TELESCOPE,	MPB	8191.00	24.0000	2.5556	23	16	12
9	1240010397273	MOUNT,TELE	MPB	7324.00	108.7500	5.8438	33	18	17
10	1240012018299	MOUNT,TELE	MPB	1013.00	0.8300	0.4500	1	1	1
11	1260012362158	LASER DESI	MPB	51139.00	22.0000	1.8750	60	9	6
12	1290010377289	QUADRANT,F	MPB	2702.00	10.7500	0.4010	11	9	7
13	1430010403750	CONTROL,SI	MPB	2539.00	2.2500	0.1250	6	3	12
14	1440012156014	SIGHT,OPTI	MPB	19186.00	72.5000	6.4653	28	19	21
15	2350011996319	PANEL,INST	MPB	4263.80	21.0000	1.2200	1	1	1
16	2510219083070	STRUT ASSE	MPB	8365.69	0.0000	0.0000	1	1	1
17	2520000893773	COMBINATIO	MPB	5246.00	1000.0000	36.6667	44	40	36
18	2520004507502	SHAFT ASSE	MPB	415.41	390.0000	16.0000	1	1	1
19	2520011173010	TRANSMISSI	MPB	13163.00	1020.0000	35.6250	57	30	36
20	2520011343891	TRANSMISSI	MPB	33424.96	2875.0000	120.5000	1	1	1
21	2520011441528	TRANSFER A	MPB	7603.00	1101.0000	35.6481	44	40	35
22	2520011448667	TRANSMISSI	MPB	13049.17	430.0000	11.3889	41	24	20
23	2520011787149	TRANSMISSI	MPB	14719.99	950.0000	11.0000	1	1	1
24	2530004385150	SUPPORT AS	MPB	6175.13	340.0000	24.3000	1	1	1
25	2530004385156	SUPPORT AS	MPB	5835.01	340.0000	24.3000	1	1	1
26	2530011418617	HYDROSTATI	MPB	40403.95	34.0000	19.0000	1	1	1
27	2530012014816	WHEEL,SOLI	MPB	439.00	8.0000	0.1390	1	1	1
28	2815001780268	ENGINE,DIE	MPB	13833.00	4370.0000	117.1042	73	44	63
29	2815011357475	TURBOCHARG	MPB	1005.52	57.0000	4.2700	1	1	1
30	2815011408799	ENGINE AND	MPB	52902.10	3604.0000	154.0000	64	66	63
31	2815011650478	ENGINE,DIE	MPB	36324.92	2500.0000	95.0000	1	1	1
32	2815011867251	ENGINE,DIE	MPB	28091.63	3109.0000	32.5000	1	1	1
33	2990001184942	POWER TAKE	MPB	33129.91	370.0000	2.0000	1	1	1
34	5820008920622	RECEIVER-T	MPB	7840.00	76.1300	1.8333	18	16	11
35	5820009303725	RECEIVER-T	MPB	2122.00	13.0000	0.3333	12	4	12
36	5820010692638	RECEIVER-T	MPB	15464.34	0.1000	0.0006	1	1	1
37	5820012705099	RECEIVER-T	MPB	23246.06	13.0000	0.0000	1	1	1
38	5820012868792	RECEIVER-T	MPB	9833.06	13.0000	0.0000	1	1	1
39	5820013652725	RECEIVER-T	MPB	6838.00	0.0000	0.0000	1	1	1
40	5830011385787	CONTROL,IN	MPB	645.10	4.0000	0.1000	1	1	1
41	5895010655044	AMPLIFIER,	MPB	5563.34	4.0000	0.3125	18	10	3
42	5895013343164	AMPLIFIER,	MPB	1876.00	37.0000	3.0770	1	1	1
43	5895013393686	EM DIGITAL	MPB	30937.97	0.0000	0.0000	1	1	1
44	5985010504869	COUPLER,AN	MPB	4991.88	41.0000	0.9375	15	12	9
45	5996011863699	AMPLIFIER,	MPB	46513.07	55.0000	1.0625	17	12	9

46	5998012545859	CIRCUIT CA	MPB	12931.62	0.3000	0.0000	1	1	1
47	5998012602527	CIRCUIT CA	MPB	3485.06	0.2000	0.0000	1	1	1
48	5998013581187	CIRCUIT CA	MPB	3704.36	0.3000	0.0000	1	1	1
49	5999010659011	CIRCUIT CA	MPB	4221.94	0.1000	0.0006	1	1	1
50	5999010661352	CIRCUIT CA	MPB	2027.90	0.1000	0.0000	1	1	1
51	5999012401249	CIRCUIT CA	MPB	630.00	4.0000	0.2500	1	1	1
52	6150011029170	CABLE ASSE	MPB	2846.00	8.0000	0.9103	11	11	13

APPENDIX A - REPAIRABLE RO EQUATION

GROUND SIMULATION

RCR = (RR X RCT) / 30 days OSR = [(MFR - RR) X OST] / 30 days SL = RCR + OSR RO = RCR + OSR +SL

ITEM NO	NSN	RR	RCT	RCR	MFR	RR	OST	OSR	SL	RO
1	1005011643558	47	38	60	50	47	34	3	63	127
2	1005012148884	13	27	12	15	13	24	2	13	27
3	1010012579961	6	41	8	5	6	75	0	8	17
4	1010012579962	4	31	4	4	4	20	0	4	9
5	1010012589660	4	29	4	4	4	19	0	4	8
6	1010012589661	4	53	7	4	4	272	0	7	14
7	1015011656212	7	36	8	7	7	25	1	8	17
8	1240010380531	15	29	14	15	15	23	0	14	29
9	1240010397273	7	38	9	8	7	50	0	10	20
10	1240012018299	23	35	28	24	23	27	1	29	58
11	1260012362158	6	39	8	6	6	298	0	8	16
12	1290010377289	4	41	6	4	4	17	0	6	12
13	1430010403750	6	36	7	6	6	50	0	7	15
14	1440012156014	7	26	6	7	7	223	1	7	15
15	2350011996319	13	33	15	14	13	16	0	15	30
16	2510219083070	2	30	2	1	2	24	0	2	4
17	2520000893773	7	63	14	7	7	179	1	16	32
18	2520004507502	8	35	10	8	8	47	0	10	20
19	2520011173010	13	56	24	13	13	52	0	24	49
20	2520011343891	5	58	10	6	5	100	2	12	25
21	2520011441528	8	48	12	7	8	20	0	12	25
22	2520011448667	3	37	3	3	3	21	0	3	7
23	2520011787149	3	70	8	3	3	21	0	8	16
24	2530004385150	2	23	1	2	2	162	1	3	6
25	2530004385156	2	25	1	3	2	187	6	7	15
26	2530011418617	3	38	4	4	3	88	1	5	11
27	2530012014816	7	59	14	8	7	21	1	14	29
28	2815001780268	6	77	14	6	6	28	0	15	30
29	2815011357475	10	37	12	10	10	20	0	12	25
30	2815011408799	15	86	42	16	15	36	1	43	86
31	2815011650478	6	71	15	6	6	117	1	16	32
32	2815011867251	6	92	20	7	6	40	1	21	42
33	2990001184942	3	48	5	3	3	15	0	5	10
34	5820008920622	39	34	44	38	39	109	0	44	88
35	5820009303725	68	33	75	63	68	28	0	75	151
36	5820010692638	50	25	43	51	50	27	0	43	87
37	5820012705099	12	27	10	12	12	23	0	11	22
38	5820012868792	16	40	22	17	16	32	0	22	45
39	5820013652725	109	17	60	111	109	148	9	69	138
40	5830011385787	56	14	27	56	56	23	0	27	54
41	5895010655044	21	24	17	22	21	26	1	18	37
42	5895013343164	18	34	21	18	18	41	0	21	42
43	5895013393686	21	17	12	21	21	46	0	12	25
44	5985010504869	17	28	16	17	17	62	0	16	33
45	5996011863699	14	14	6	16	14	55	4	10	21
46	5998012545859	8	39	8	6	6	24	0	8	17
47	5998012602527	3	34	3	3	3	12	0	3	6
48	5998013581187	4	75	9	3	4	46	0	9	18
49	5999010659011	11	60	21	11	11	19	0	21	43
50	5999010661352	15	59	29	15	15	93	1	30	60
51	5999012401249	0	3	0	0	0	28	0	0	0
52	6150011029170	5	34	6	5	5	165	0	6	12

RCR = Repair Cycle Rqmt
RR = Repair Rate
RCT = Repair Cycle Time

OSR = Order and Shipping Rqmt
MFR = Maintenance Failure Rate
RR = Repair Rate
OST = Order Ship Time

SL = Safety Level

RO = Requisitioning Objective

APPENDIX A - REPAIRABLE EQUATION

PREMIUM SIMULATION

RCR = (RR X RCT) / 30 day OSR = [(MFR - RR) X OST] / 30 day SL = RCR + OSR RO = RCR + OSR +SL

ITEM NO	NSN	RR	RCT	RCR	MFR	RR	OST	OSR	SL	RO
1	1005011643558	47	38	60	50	47	23	2	62	125
2	1005012148884	13	27	12	15	13	18	1	13	27
3	1010012579961	6	41	8	5	6	72	0	8	17
4	1010012579962	4	31	4	4	4	16	0	4	9
5	1010012589660	4	29	4	4	4	13	0	4	8
6	1010012589661	4	53	7	4	4	267	0	7	14
7	1015011656212	7	36	8	7	7	23	1	8	17
8	1240010380531	15	29	14	15	15	18	0	14	28
9	1240010397273	7	38	9	8	7	43	0	10	20
10	1240012018299	23	35	28	24	23	22	1	28	57
11	1260012362158	6	39	8	6	6	200	0	8	16
12	1290010377289	4	41	6	4	4	11	0	6	12
13	1430010403750	6	36	7	6	6	45	0	7	15
14	1440012156014	7	26	6	7	7	220	1	7	15
15	2350011996319	13	33	15	14	13	11	0	15	30
16	2510219083070	2	30	2	1	2	21	0	2	4
17	2520000893773	7	63	14	7	7	162	1	16	32
18	2520004507502	8	35	10	8	8	33	0	10	20
19	2520011173010	13	56	24	13	13	47	0	24	49
20	2520011343891	5	58	10	6	5	100	2	12	25
21	2520011441528	8	48	12	7	8	17	0	12	25
22	2520011448667	3	37	3	3	3	15	0	3	7
23	2520011787149	3	70	8	3	3	15	0	8	16
24	2530004385150	2	23	1	2	2	165	1	3	6
25	2530004385156	2	25	1	3	2	185	6	7	15
26	2530011418617	3	38	4	4	3	88	1	5	11
27	2530012014816	7	59	14	8	7	15	0	14	29
28	2815001780268	6	77	14	6	6	19	0	15	30
29	2815011357475	10	37	12	10	10	16	0	12	25
30	2815011408799	15	86	42	16	15	19	1	42	85
31	2815011650478	6	71	15	6	6	97	1	16	32
32	2815011867251	6	92	20	7	6	36	1	21	42
33	2990001184942	3	48	5	3	3	14	0	5	10
34	5820008920622	39	34	44	38	39	71	0	44	88
35	5820009303725	68	33	75	63	68	10	0	75	151
36	5820010692638	50	25	43	51	50	16	0	43	87
37	5820012705099	12	27	10	12	12	16	0	11	22
38	5820012868792	16	40	22	17	16	22	0	22	44
39	5820013652725	109	17	60	111	109	99	6	66	132
40	5830011385787	56	14	27	56	56	13	0	27	54
41	5895010655044	21	24	17	22	21	11	0	18	36
42	5895013343164	18	34	21	18	18	31	0	21	42
43	5895013393686	21	17	12	21	21	39	0	12	25
44	5985010504869	17	28	16	17	17	42	0	16	33
45	5996011863699	14	14	6	16	14	51	4	10	20
46	5998012545859	6	39	8	6	6	20	0	8	17
47	5998012602527	3	34	3	3	3	8	0	3	6
48	5998013581187	4	75	9	3	4	36	0	9	18
49	5999010659011	11	60	21	11	11	12	0	21	43
50	5999010661352	15	59	29	15	15	68	0	30	60
51	5999012401249	0	3	0	0	0	24	0	0	0
52	6150011029170	5	34	6	5	5	159	0	6	12

RCR = Repair Cycle Rqmt
RR = Repair Rate
RCT = Repair Cycle Time

OSR = Order and Shipping Rqmt
MFR = Maintenance Failure Rate
RR = Repair Rate
OST = Order Ship Time

SL = Safety Level RO = Requisitioning Objective

APPENDIX A - MFR DATA

ITEM NO	EROs OPENED FOR EACH NSN	APR 96	MAY 96	JUN 96	JUL 96	AUG 96	SEP 96	OCT 96	NOV 96	DEC 96	JAN 97	FEB 97	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	1005011643558	44	30	25	33	36	21	66	37	67	37	68	82	88	51	33	36	23	32
2	1005012148884	17	18	8	5	14	5	17	5	2	11	24	22	22	18	26	26	33	12
3	1010012579961	9	8	4	1	9	6	4	1	7	6	4	7	4	12	4	3	7	9
4	1010012579962	3	5	0	1	2	5	9	2	3	2	3	4	5	6	4	8	5	5
5	1010012589660	2	5	4	3	3	3	6	4	4	3	4	1	7	5	3	4	3	7
6	1010012589661	6	3	3	1	5	3	6	1	3	2	9	1	2	7	3	1	2	2
7	1015011656212	13	5	3	6	7	14	2	2	7	10	9	14	8	7	6	3	6	4
8	1240010380531	11	16	15	12	13	15	10	25	10	15	15	10	21	18	16	14	7	6
9	1240010397273	6	7	10	1	6	6	8	3	9	6	10	6	13	13	8	8	9	1
10	1240012018299	20	9	21	17	23	25	29	18	30	26	23	25	38	22	25	25	13	8
11	1260012362158	10	6	7	2	1	6	3	2	5	3	23	9	4	4	5	2	2	2
12	1290010377289	4	3	4	6	9	1	4	2	4	2	5	4	4	4	6	5	7	4
13	1430010403750	7	4	8	10	4	3	7	7	16	2	2	3	0	7	16	5	4	2
14	1440012156014	5	11	10	8	11	8	4	3	6	14	9	4	4	6	8	7	9	3
15	2350011996319	6	3	10	3	17	12	26	2	10	12	20	16	14	15	22	20	16	9
16	2510219083070	1	2	1	1	6	0	0	0	0	1	3	1	2	5	1	1	0	1
17	2520000893773	6	17	6	8	7	9	15	3	5	4	5	7	7	11	6	3	3	0
18	2520004507502	1	3	14	8	8	14	11	3	10	5	6	3	18	8	7	10	9	6
19	2520011173010	20	18	23	13	15	8	6	8	10	18	22	12	9	17	14	10	4	3
20	2520011343891	5	3	8	6	1	5	8	9	10	4	4	2	7	10	7	6	1	1
21	2520011441528	4	15	7	4	8	3	10	5	5	5	11	10	5	13	4	7	8	3
22	2520011448667	0	0	6	1	2	1	2	1	4	3	1	6	3	5	4	6	3	0
23	2520011787149	3	5	2	4	3	1	4	2	2	5	6	4	3	5	1	1	0	0
24	2530004385150	0	0	1	0	1	1	1	2	1	0	4	2	0	5	3	5	8	1
25	2530004385156	0	0	3	0	2	1	3	1	0	13	0	0	3	1	7	5	5	0
26	2530011418617	1	2	7	0	3	2	0	2	4	3	6	3	13	4	3	2	0	1
27	2530012014816	5	5	10	8	6	7	6	9	12	11	8	6	5	12	5	5	0	0
28	2815001780268	6	8	7	4	9	5	5	2	0	8	18	3	8	8	5	2	2	0
29	2815011357475	8	8	4	2	28	10	18	8	2	4	15	15	10	9	3	11	4	4
30	2815011408799	13	16	13	12	15	19	20	19	9	19	14	20	20	10	18	8	5	5
31	2815011650478	6	4	6	6	12	5	5	11	6	4	9	6	7	2	5	3	4	1
32	2815011867251	12	5	10	4	17	5	8	4	13	6	10	4	6	3	7	1	2	0
33	2990001184942	4	6	7	1	3	2	4	0	3	2	2	4	5	2	1	5	0	0
34	5820008920622	80	71	56	48	69	43	74	18	39	26	19	16	32	27	29	58	17	5
35	5820009303725	230	171	113	111	157	54	40	57	90	26	33	56	42	27	38	45	23	7
36	5820010692638	57	56	69	51	60	24	38	29	47	64	61	57	55	45	68	68	69	16
37	5820012705099	16	10	13	5	13	5	5	15	7	19	23	14	15	6	13	14	12	6
38	5820012868792	15	20	23	9	19	12	5	9	22	24	13	24	32	16	14	9	11	5
39	5820013652725	49	50	95	93	111	81	111	97	100	103	157	125	141	148	118	88	115	77
40	5830011385787	43	38	96	50	91	46	46	23	55	47	72	67	48	40	73	66	84	43
41	5895010655044	28	22	23	13	16	13	10	17	29	29	28	25	34	21	33	21	18	9
42	5895013343164	12	14	13	9	16	12	7	13	18	26	36	29	11	19	19	20	21	16
43	5895013393686	15	8	16	17	44	11	30	18	15	27	11	27	13	9	38	45	15	23
44	5985010504869	32	22	13	14	17	12	22	14	19	17	19	11	27	11	20	13	16	9
45	5996011863699	1	0	0	0	0	1	1	0	15	18	29	42	26	29	30	40	32	12
46	5998012545859	18	10	8	4	9	9	6	6	5	8	3	3	2	5	2	1	13	1
47	5998012602527	3	1	2	7	1	0	0	2	0	6	0	2	7	5	6	2	0	0
48	5998013581187	4	4	3	4	3	2	5	2	4	6	2	2	1	9	1	2	4	1
49	5999010659011	21	16	9	10	8	4	8	3	8	9	13	18	11	14	13	29	19	1
50	5999010661352	16	24	10	8	10	8	8	10	8	23	14	34	15	16	12	32	18	7
51	5999012401249	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	0	2	0
52	6150011029170	4	4	4	14	9	2	2	5	7	7	5	7	3	1	0	4	3	1

APPENDIX A - MFR DATA

ITEM NO	12-MONTH AVG MFR FOR EACH NSN	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	1005011643558	46	49	51	52	52	51	52
2	1005012148884	12	13	13	14	16	18	18
3	1010012579961	6	5	5	5	6	5	6
4	1010012579962	3	3	4	4	4	5	5
5	1010012589660	4	4	4	4	4	4	4
6	1010012589661	4	3	4	4	4	3	3
7	1015011656212	8	7	7	8	7	7	7
8	1240010380531	14	15	15	15	15	15	14
9	1240010397273	7	7	8	7	8	8	8
10	1240012018299	22	24	25	25	26	25	24
11	1260012362158	6	6	6	6	6	6	5
12	1290010377289	4	4	4	4	4	4	4
13	1430010403750	6	6	6	6	6	6	6
14	1440012156014	8	8	7	7	7	7	6
15	2350011996319	11	12	13	14	16	15	15
16	2510219083070	1	1	2	2	2	1	1
17	2520000893773	8	8	7	7	7	7	6
18	2520004507502	7	9	9	8	9	9	8
19	2520011173010	14	14	13	13	12	12	11
20	2520011343891	5	6	6	6	6	6	6
21	2520011441528	7	7	7	7	7	7	7
22	2520011448667	2	3	3	3	3	3	3
23	2520011787149	3	3	3	3	3	3	3
24	2530004385150	1	1	2	2	2	3	3
25	2530004385156	2	2	2	3	3	3	3
26	2530011418617	3	4	4	4	4	4	3
27	2530012014816	8	8	8	8	8	7	7
28	2815001780268	6	6	6	6	6	6	5
29	2815011357475	10	10	10	10	11	9	9
30	2815011408799	16	16	16	16	16	15	14
31	2815011650478	7	7	7	7	6	6	5
32	2815011867251	8	8	8	7	7	6	5
33	2990001184942	3	3	3	2	3	3	2
34	5820008920622	47	43	39	37	38	33	30
35	5820009303725	95	79	67	61	55	44	40
36	5820010692638	51	51	50	50	51	52	51
37	5820012705099	12	12	12	12	12	12	12
38	5820012868792	16	18	17	17	17	16	15
39	5820013652725	98	105	114	115	115	115	115
40	5830011385787	56	57	57	55	56	56	55
41	5895010655044	21	22	22	22	23	23	23
42	5895013343164	17	17	17	18	19	19	20
43	5895013393686	20	20	20	22	24	22	23
44	5985010504869	18	17	16	17	17	17	17
45	5996011863699	9	11	13	16	19	22	23
46	5998012545859	7	6	6	5	5	5	5
47	5998012602527	2	2	3	3	3	3	3
48	5998013581187	3	3	4	3	3	3	3
49	5999010659011	11	10	10	10	12	12	12
50	5999010661352	14	14	14	14	16	17	16
51	5999012401249	0	0	0	0	0	0	0
52	6150011029170	6	6	6	5	4	4	4

APPENDIX A - RR DATA

ITEM NO	EROs CLOSED FOR EACH NSN	APR 96	MAY 96	JUN 96	JUL 96	AUG 96	SEP 96	OCT 96	NOV 96	DEC 96	JAN 97	FEB 97	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	1005011643558	29	24	21	26	29	36	16	52	32	43	79	40	95	57	98	53	29	50
2	1005012148884	16	16	9	4	6	13	4	12	6	5	19	13	18	13	19	41	33	38
3	1010012579961	2	3	10	1	5	5	6	7	3	4	3	14	6	9	5	3	8	11
4	1010012579962	0	1	5	1	1	3	2	7	2	4	3	8	3	6	5	4	10	6
5	1010012589660	0	1	5	3	5	4	3	3	4	5	3	5	3	8	3	3	3	10
6	1010012589661	1	0	4	1	4	4	3	3	3	5	8	3	2	6	6	1	2	4
7	1015011656212	7	10	1	3	8	9	8	3	0	9	5	14	8	4	6	11	7	13
8	1240010380531	1	8	21	13	11	18	11	9	17	14	16	19	9	21	20	18	12	11
9	1240010397273	0	6	9	3	4	6	7	4	5	7	9	5	13	18	7	8	10	9
10	1240012018299	7	9	21	15	16	23	18	9	26	28	31	26	33	34	29	26	11	35
11	1260012362158	4	4	4	4	1	10	3	5	5	3	18	6	5	7	4	4	3	6
12	1290010377289	2	2	5	3	6	5	2	4	2	2	5	4	7	2	5	7	6	9
13	1430010403750	3	6	3	7	13	2	3	1	6	17	2	2	5	2	14	11	7	3
14	1440012156014	3	9	10	5	14	4	7	4	2	14	10	6	1	6	6	9	12	8
15	2350011996319	0	7	3	5	7	13	22	11	4	7	11	22	14	14	20	23	33	17
16	2510219083070	0	0	1	0	4	2	3	0	0	0	1	2	1	4	2	4	0	2
17	2520000893773	0	3	9	11	11	7	7	4	7	5	6	4	8	8	8	14	8	2
18	2520004507502	0	1	3	12	15	2	5	9	14	8	3	4	14	14	10	7	9	14
19	2520011173010	6	15	13	17	16	13	5	5	5	14	14	24	9	19	19	15	10	11
20	2520011343891	0	4	1	6	7	3	1	4	2	7	12	4	4	7	6	11	10	8
21	2520011441528	0	2	4	10	10	6	3	7	4	12	11	4	7	12	6	10	10	9
22	2520011448667	1	0	1	0	2	4	2	2	0	4	2	6	2	6	5	3	4	5
23	2520011787149	0	1	3	0	3	2	3	2	1	7	4	8	2	3	6	3	0	3
24	2530004385150	0	0	0	1	0	0	0	1	3	2	2	2	2	2	3	7	4	6
25	2530004385156	0	0	3	0	0	1	1	3	2	2	0	1	0	3	1	9	5	3
26	2530011418617	0	0	2	2	7	3	0	0	2	3	1	0	5	10	9	5	5	2
27	2530012014816	0	0	0	16	7	6	5	6	1	7	10	7	1	7	26	16	5	0
28	2815001780268	0	2	3	2	10	2	3	1	5	8	9	8	9	4	8	8	6	12
29	2815011357475	6	6	3	3	17	12	13	7	5	3	13	17	18	13	8	7	7	5
30	2815011408799	2	4	2	4	10	8	11	18	15	20	12	19	15	22	31	18	14	30
31	2815011650478	0	2	1	2	9	10	5	7	4	4	5	8	13	8	0	13	4	7
32	2815011867251	3	2	6	6	2	3	5	10	6	6	7	6	5	13	11	7	6	13
33	2990001184942	0	3	6	1	6	3	1	1	4	3	1	3	3	6	1	6	2	1
34	5820008920622	35	41	71	84	60	33	61	27	42	25	21	27	46	22	40	12	30	51
35	5820009303725	120	109	157	125	180	84	43	60	65	66	25	38	54	55	34	34	33	40
36	5820010692638	18	56	63	46	75	34	28	32	36	54	58	61	58	63	43	58	75	76
37	5820012705099	10	9	11	8	10	5	4	13	5	15	27	14	11	14	9	15	13	18
38	5820012868792	4	13	20	8	27	9	4	6	14	20	17	20	38	21	25	10	11	15
39	5820013652725	27	46	74	105	77	84	98	106	120	74	155	120	141	153	122	99	131	127
40	5830011385787	33	32	76	71	81	44	48	25	60	27	77	75	55	39	65	70	77	76
41	5895010655044	14	18	30	12	19	11	12	12	23	27	25	25	20	33	35	31	14	28
42	5895013343164	2	13	8	9	12	18	11	5	15	20	39	32	17	16	22	20	27	25
43	5895013393686	7	10	12	15	35	27	9	32	17	31	9	26	9	14	36	47	13	33
44	5985010504869	9	23	17	13	26	14	11	15	19	17	17	16	21	13	18	23	12	24
45	5996011863699	0	0	0	0	0	0	0	0	0	15	25	36	31	19	28	41	43	38
46	5998012545859	4	6	12	10	10	12	3	5	4	1	9	5	4	6	5	3	3	11
47	5998012602527	0	3	0	6	2	2	0	0	0	5	1	2	1	6	5	7	4	0
48	5998013581187	0	0	3	3	5	2	1	1	4	2	9	3	2	6	6	4	4	4
49	5999010659011	2	10	12	14	7	10	4	5	8	4	10	15	7	23	11	33	21	19
50	5999010661352	0	9	13	10	6	10	15	10	9	16	18	13	18	34	15	22	24	31
51	5999012401249	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	2	0
52	6150011029170	0	2	5	2	21	4	0	5	1	11	5	4	9	3	2	3	1	4

APPENDIX A - RR DATA

ITEM NO	12-MONTH AVG RR FOR EACH NSN	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	1005011643558	36	41	44	50	53	53	54
2	1005012148884	10	10	10	11	14	16	18
3	1010012579961	5	6	6	6	6	6	7
4	1010012579962	3	3	4	4	4	5	5
5	1010012589660	3	4	4	4	4	4	4
6	1010012589661	3	3	4	4	4	4	4
7	1015011656212	6	7	6	6	7	7	7
8	1240010380531	13	14	15	15	15	15	15
9	1240010397273	5	7	8	7	8	8	9
10	1240012018299	19	21	23	24	25	25	26
11	1260012362158	6	6	6	6	6	6	6
12	1290010377289	4	4	4	4	4	4	5
13	1430010403750	5	6	5	6	7	6	6
14	1440012156014	7	7	7	7	7	7	7
15	2350011996319	9	11	11	13	14	16	17
16	2510219083070	1	1	2	2	2	2	2
17	2520000893773	6	7	7	7	7	7	7
18	2520004507502	6	8	9	9	9	8	9
19	2520011173010	12	13	13	13	13	13	13
20	2520011343891	4	5	5	5	6	6	6
21	2520011441528	6	7	8	8	8	8	8
22	2520011448667	2	2	3	3	3	3	3
23	2520011787149	3	3	3	3	4	3	4
24	2530004385150	1	1	1	2	2	2	3
25	2530004385156	1	1	1	1	2	2	3
26	2530011418617	2	2	3	4	4	4	4
27	2530012014816	5	6	6	8	8	8	8
28	2815001780268	4	5	5	6	6	6	7
29	2815011357475	9	10	10	11	11	10	10
30	2815011408799	10	12	13	15	17	17	19
31	2815011650478	5	6	6	6	7	7	7
32	2815011867251	5	5	6	7	7	7	8
33	2990001184942	3	3	3	3	3	3	3
34	5820008920622	44	45	43	41	35	32	34
35	5820009303725	89	84	79	69	62	49	46
36	5820010692638	47	50	51	49	50	50	54
37	5820012705099	11	11	11	11	12	12	13
38	5820012868792	14	16	17	17	18	16	17
39	5820013652725	91	100	109	113	112	117	121
40	5830011385787	54	56	57	56	56	55	58
41	5895010655044	19	20	21	21	23	22	24
42	5895013343164	15	17	17	18	19	20	21
43	5895013393686	19	19	20	22	24	23	23
44	5985010504869	16	17	17	17	18	16	17
45	5996011863699	6	9	11	13	16	20	23
46	5998012545859	7	7	7	6	6	5	5
47	5998012602527	2	2	2	3	3	3	3
48	5998013581187	3	3	3	4	4	4	4
49	5999010659011	8	9	10	10	11	13	13
50	5999010661352	11	12	14	15	16	17	19
51	5999012401249	0	0	0	0	0	0	0
52	6150011029170	5	6	6	6	6	4	4

APPENDIX A - RCT DATA

ITEM NO	TOTAL RCT FOR EACH NSN	APR 96	MAY 96	JUN 96	JUL 96	AUG 96	SEP 96	OCT 96	NOV 96	DEC 96	JAN 97	FEB 97	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	1005011643558	151	402	651	786	613	1447	562	1147	1561	2233	3389	1608	4452	2300	5112	1920	957	1046
2	1005012148884	83	134	149	55	135	275	124	434	244	178	403	242	478	235	726	2241	766	1094
3	1010012579961	14	73	331	36	516	323	337	358	118	103	186	456	77	75	31	177	52	108
4	1010012579962	0	7	164	70	6	31	130	209	34	245	165	318	39	52	81	28	155	65
5	1010012589660	0	9	209	136	183	140	60	76	133	237	15	367	16	65	88	69	50	174
6	1010012589661	22	0	237	92	317	183	237	119	355	371	229	77	42	290	110	40	63	84
7	1015011656212	88	188	36	77	142	52	314	130	0	500	139	469	152	258	380	839	725	481
8	1240010380531	19	160	448	365	339	614	220	223	284	382	407	432	556	741	573	583	323	235
9	1240010397273	0	122	164	94	199	214	344	143	139	184	738	128	575	400	185	521	371	331
10	1240012018299	38	156	309	387	310	485	617	221	912	1075	1992	949	1316	1391	1874	1059	285	2238
11	1260012362158	8	110	48	90	59	932	202	229	112	83	198	74	100	506	176	120	175	265
12	1290010377289	26	19	170	74	114	176	99	200	29	69	176	170	202	359	129	174	139	220
13	1430010403750	19	206	75	200	332	22	76	12	287	613	127	35	566	103	101	447	187	38
14	1440012156014	26	99	202	100	241	55	134	146	19	308	261	132	63	140	319	356	428	236
15	2350011996319	0	70	49	127	72	246	611	614	181	351	181	659	226	497	1905	682	1774	366
16	2510219083070	0	0	64	0	212	160	138	0	0	0	35	70	23	123	60	457	0	83
17	2520000893773	0	55	460	750	424	404	242	149	537	332	552	386	382	423	970	1108	633	73
18	2520004507502	0	1	113	486	489	60	148	597	702	305	45	119	731	696	151	237	171	343
19	2520011173010	69	246	425	633	932	548	168	280	781	878	639	1068	233	1001	1258	878	816	668
20	2520011343891	0	88	8	196	403	116	6	89	44	463	676	422	496	539	832	1155	920	705
21	2520011441528	0	46	100	484	773	264	157	456	234	830	454	45	399	587	235	406	299	541
22	2520011448667	3	0	18	0	139	314	14	177	0	247	87	231	45	169	202	21	171	277
23	2520011787149	0	42	35	0	246	186	287	75	158	684	150	168	138	63	836	490	0	399
24	2530004385150	0	0	0	33	0	0	0	58	201	122	28	42	20	15	51	92	56	140
25	2530004385156	0	0	33	0	0	25	63	134	69	24	0	55	0	98	35	155	104	90
26	2530011418617	0	0	16	142	290	171	0	0	102	171	6	0	390	682	565	353	377	68
27	2530012014816	0	0	0	895	270	400	239	269	55	548	797	499	33	820	3065	708	293	0
28	2815001780268	0	33	99	110	849	176	126	110	694	877	177	290	872	188	712	1011	903	2209
29	2815011357475	59	79	75	133	253	414	320	259	150	188	1435	407	345	681	151	60	38	63
30	2815011408799	16	57	120	166	946	692	967	1407	1513	1912	749	1457	1586	1868	4267	2078	2291	2742
31	2815011650478	0	50	8	41	511	547	655	374	452	345	324	942	930	407	0	1270	396	437
32	2815011867251	32	36	241	415	131	69	390	1080	536	479	723	812	602	1522	1001	1135	1010	3052
33	2990001184942	0	75	60	61	371	194	25	20	245	88	53	135	74	600	9	120	432	181
34	5820008920622	236	548	2469	2127	1162	764	1115	449	1740	1192	1131	878	2484	1045	1268	264	793	2654
35	5820009303725	982	1540	5650	4430	4976	2076	1111	2051	2450	2538	554	786	3001	2675	1509	954	710	2500
36	5820010692638	118	1011	927	1412	1603	668	859	1151	672	1455	1514	1614	1472	1847	1035	1528	2027	2289
37	5820012705099	66	110	184	198	127	95	258	121	56	545	1052	395	277	486	213	274	496	547
38	5820012868792	24	165	402	234	1042	325	190	225	454	1198	757	735	1734	881	917	532	490	472
39	5820013652725	149	616	892	1149	1172	1141	1300	1637	3014	1211	2543	1527	3389	2484	2157	1849	3752	2822
40	5830011385787	198	289	588	936	816	522	700	469	1182	442	1078	936	569	699	974	1173	976	1198
41	5895010655044	79	333	531	338	520	151	386	212	450	694	628	664	538	1116	1044	852	353	690
42	5895013343164	13	190	139	265	426	404	590	312	564	893	947	582	544	594	473	731	633	481
43	5895013393686	61	195	168	224	304	645	117	485	556	461	166	202	74	507	486	494	134	536
44	5985010504869	131	386	592	478	680	252	118	421	412	565	507	548	834	367	768	808	397	455
45	5996011863699	0	0	0	0	0	0	0	0	0	377	401	762	420	1046	913	1863	1446	982
46	5998012545859	51	125	488	455	392	353	106	179	143	27	420	214	63	910	74	91	7	183
47	5998012602527	0	74	0	78	142	156	0	0	0	235	75	67	31	315	133	280	340	0
48	5998013581187	0	0	163	166	380	141	85	143	383	175	405	47	104	1095	462	284	127	69
49	5999010659011	34	237	372	803	256	1117	343	162	670	307	284	922	580	1252	509	1245	854	610
50	5999010661352	0	213	363	708	333	682	1425	827	589	961	902	570	951	1571	973	1060	941	1163
51	5999012401249	0	0	0	17	0	0	0	0	0	0	0	6	0	17	13	0	24	0
52	6150011029170	0	57	201	90	491	135	0	297	34	496	103	101	413	157	117	33	21	127

APPENDIX A - RCT DATA

ITEM NO	AVERAGE RCT FOR EACH NSN	APR 96	MAY 96	JUN 96	JUL 96	AUG 96	SEP 96	OCT 96	NOV 96	DEC 96	JAN 97	FEB 97	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	1005011643558	5	17	31	30	21	40	35	22	49	52	43	40	47	40	52	36	33	21
2	1005012148884	5	8	17	14	23	21	31	36	41	36	21	19	27	18	38	55	23	29
3	1010012579961	7	24	33	36	103	65	56	51	39	26	62	33	13	8	6	59	7	10
4	1010012579962	0	7	33	70	6	10	65	30	17	61	55	40	13	9	16	7	16	11
5	1010012589660	0	9	42	45	37	35	20	25	33	47	5	73	5	8	29	23	17	17
6	1010012589661	22	0	59	92	79	46	79	40	118	74	29	26	21	48	18	40	32	21
7	1015011656212	13	19	36	26	18	6	39	43	0	56	28	34	19	65	63	76	104	37
8	1240010380531	19	20	21	28	31	34	20	25	17	27	25	23	62	35	29	32	27	21
9	1240010397273	0	20	18	31	50	36	49	36	28	26	82	26	44	22	26	65	37	37
10	1240012018299	5	17	15	26	19	21	34	25	35	38	64	37	40	41	65	41	26	64
11	1260012362158	2	28	12	23	59	93	67	46	22	28	11	12	20	72	44	30	58	44
12	1290010377289	13	10	34	25	19	35	50	50	15	35	35	43	29	180	26	25	23	24
13	1430010403750	6	34	25	29	26	11	25	12	48	36	64	18	113	52	7	41	27	13
14	1440012156014	9	11	20	20	17	14	19	37	10	22	26	22	63	23	53	40	36	30
15	2350011996319	0	10	16	25	10	19	28	56	45	50	16	30	16	36	95	30	54	22
16	2510219083070	0	0	64	0	53	80	46	0	0	0	35	35	23	31	30	114	0	42
17	2520000893773	0	18	51	68	39	58	35	37	77	66	92	97	48	53	121	79	79	37
18	2520004507502	0	1	38	41	33	30	30	66	50	38	15	30	52	50	15	34	19	25
19	2520011173010	12	16	33	37	58	42	34	56	156	63	46	45	26	53	66	59	82	61
20	2520011343891	0	22	8	33	58	39	6	22	22	66	56	106	124	77	139	105	92	88
21	2520011441528	0	23	25	48	77	44	52	65	59	69	41	11	57	49	39	41	30	60
22	2520011448667	3	0	18	0	70	79	7	89	0	62	44	39	23	28	40	7	43	55
23	2520011787149	0	42	12	0	82	93	96	38	158	98	38	21	69	21	139	163	0	133
24	2530004385150	0	0	0	33	0	0	0	58	67	61	14	21	10	8	17	13	14	23
25	2530004385156	0	0	11	0	0	25	63	45	35	12	0	55	0	33	35	17	21	30
26	2530011418617	0	0	8	71	41	57	0	0	51	57	6	0	78	68	63	71	75	34
27	2530012014816	0	0	0	56	39	67	48	45	55	78	80	71	33	117	118	44	59	0
28	2815001780268	0	17	33	55	85	88	42	110	139	110	20	36	97	47	89	126	151	184
29	2815011357475	10	13	25	44	15	35	25	37	30	63	110	24	19	52	19	9	5	13
30	2815011408799	8	14	60	42	95	87	88	78	101	96	62	77	106	85	138	115	164	91
31	2815011650478	0	25	8	21	57	55	131	53	113	86	65	118	72	51	0	98	99	62
32	2815011867251	11	18	40	69	66	23	78	108	89	80	103	135	120	117	91	162	168	235
33	2990001184942	0	25	10	61	62	65	25	20	61	29	53	45	25	100	9	20	216	181
34	5820008920622	7	13	35	25	19	23	18	17	41	48	54	33	54	48	32	22	26	52
35	5820009303725	8	14	36	35	28	25	26	34	38	38	22	21	56	49	44	28	22	63
36	5820010692638	7	18	15	31	21	20	31	36	19	27	26	26	25	29	24	26	27	30
37	5820012705099	7	12	17	25	13	19	65	9	11	36	39	28	25	35	24	18	38	30
38	5820012868792	6	13	20	29	39	36	48	38	32	60	45	37	46	42	37	53	45	31
39	5820013652725	6	13	12	11	15	14	13	15	25	16	16	13	24	16	18	19	29	22
40	5830011385787	6	9	8	13	10	12	15	19	20	16	14	12	10	18	15	17	13	16
41	5895010655044	6	19	18	28	27	14	32	18	20	26	25	27	27	34	30	27	25	25
42	5895013343164	7	15	17	29	36	22	54	62	38	45	24	18	32	37	22	37	23	19
43	5895013393686	9	20	14	15	9	24	13	15	33	15	18	8	8	36	14	11	10	16
44	5985010504869	15	17	35	37	26	18	11	28	22	33	30	34	40	28	43	35	33	19
45	5996011863699	0	0	0	0	0	0	0	0	0	25	16	21	14	55	33	45	34	26
46	5998012545859	13	21	41	46	39	29	35	36	36	27	47	43	16	152	15	30	2	17
47	5998012602527	0	25	0	13	71	78	0	0	0	47	75	34	31	53	27	40	85	0
48	5998013581187	0	0	54	55	76	71	85	143	96	88	45	16	52	183	77	71	32	17
49	5999010659011	17	24	31	57	37	112	86	32	84	77	28	61	83	54	46	38	41	32
50	5999010661352	0	24	28	71	56	68	95	83	65	60	50	44	53	46	65	48	39	38
51	5999012401249	0	0	0	17	0	0	0	0	0	0	0	6	0	17	13	0	12	0
52	6150011029170	0	29	40	45	23	34	0	59	34	45	21	25	46	52	59	11	21	32

APPENDIX A - RCT DATA

ITEM NO	12-MONTH AVG RCT FOR EACH NSN	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	1005011643558	32	36	38	39	40	41	39
2	1005012148884	23	24	25	27	30	30	31
3	1010012579961	45	45	44	42	43	35	31
4	1010012579962	33	34	34	33	27	28	28
5	1010012589660	31	31	31	30	28	27	25
6	1010012589661	55	55	59	56	52	48	45
7	1015011656212	26	27	31	33	37	44	47
8	1240010380531	24	28	29	30	30	30	29
9	1240010397273	33	37	37	38	41	40	40
10	1240012018299	28	31	33	37	38	39	42
11	1260012362158	34	35	39	41	42	42	38
12	1290010377289	30	31	46	45	45	45	44
13	1430010403750	28	37	38	37	38	38	38
14	1440012156014	19	23	24	27	29	30	32
15	2350011996319	26	27	29	36	36	40	40
16	2510219083070	26	28	31	28	37	33	30
17	2520000893773	53	57	60	66	67	70	68
18	2520004507502	31	35	39	37	37	36	35
19	2520011173010	50	51	54	57	59	60	62
20	2520011343891	36	47	51	62	68	71	75
21	2520011441528	43	48	50	51	50	46	48
22	2520011448667	34	36	38	40	40	38	36
23	2520011787149	56	62	60	71	85	78	81
24	2530004385150	21	22	23	24	22	24	25
25	2530004385156	20	20	23	25	27	28	29
26	2530011418617	24	31	36	41	41	44	42
27	2530012014816	45	48	57	67	66	68	62
28	2815001780268	61	69	72	76	82	88	96
29	2815011357475	36	37	40	39	36	36	34
30	2815011408799	67	75	81	88	94	100	100
31	2815011650478	61	67	69	68	75	78	79
32	2815011867251	68	78	86	90	98	106	124
33	2990001184942	38	40	46	46	43	56	65
34	5820008920622	28	32	35	34	34	35	37
35	5820009303725	27	31	34	35	34	33	37
36	5820010692638	23	25	25	26	26	26	27
37	5820012705099	23	25	27	27	27	29	30
38	5820012868792	33	37	39	41	43	43	43
39	5820013652725	14	16	16	16	17	18	19
40	5830011385787	13	13	14	15	15	15	15
41	5895010655044	21	23	25	26	25	25	26
42	5895013343164	31	33	35	35	35	34	34
43	5895013393686	16	16	17	17	17	17	16
44	5985010504869	25	28	28	29	29	30	30
45	5996011863699	5	6	11	14	17	20	22
46	5998012545859	34	35	45	43	42	39	38
47	5998012602527	29	31	33	36	38	39	33
48	5998013581187	61	65	80	82	83	80	75
49	5999010659011	54	59	62	63	62	62	55
50	5999010661352	54	58	60	63	61	60	57
51	5999012401249	2	2	3	4	3	4	4
52	6150011029170	30	33	35	37	34	34	34

APPENDIX A - OST DATA

ITEM NO	NSN	CUST ORDER	DEPOT SHIP	CUST RECPT	ITEM TRANSIT	GROUND CUST OST	PREMIUM CUST OST
1	1005011643558	97029	97044	97052	8	23	16
		97049	97066	97100	34	51	18
		97059	97084	97091	7	32	26
		97070	97097	97105	8	35	28
		97070	97084	97091	7	21	15
		97078	97097	97106	9	28	20
		97079	97092	97101	9	22	14
		97079	97092	97101	9	22	14
		97079	97092	97101	9	22	14
		97080	97106	97113	7	33	27
		97080	97105	97112	7	32	26
		97092	97105	97112	7	180	174
		97111	97133	97142	9	31	23
		97114	97125	97133	8	19	12
		97139	97143	97155	12	16	5
		97168	97177	97183	6	15	10
		97183	97203	97211	8	28	21
		97197	97211	97232	21	35	15
		97224	97241	97268	27	44	18
		97234	97241	97268	27	34	8
		97260	97266	97272	6	12	7
2	1005012148884	97064	97099	97105	6	41	36
		97073	97084	97091	7	55	49
		97076	97091	97098	7	22	16
		97077	97099	97105	6	28	23
		97079	97091	97098	7	19	13
		97079	97080	97086	6	7	2
		97079	97090	97094	4	15	12
		97115	97127	97133	6	18	13
		97120	97127	97133	6	13	8
		97163	97174	97178	4	15	12
		97174	97192	97195	3	21	19
		97175	97192	97195	3	20	18
		97182	97192	97195	3	13	11
		97183	97199	97206	7	23	17
		97183	97199	97206	7	23	17
		97183	97199	97206	7	23	17
		97183	97199	97206	7	23	17
		97231	97234	97237	3	6	4
		97232	97241	97251	10	19	10
		97232	97241	97251	10	19	10
		97247	97253	97261	8	102	95
		97248	97255	97261	6	13	8
		97253	97259	97268	9	15	7
3	1010012579961	97028	97066	97072	6	44	39
		97028	97219	97224	5	196	192
		97028	97051	97056	5	28	24
		97028	97051	97056	5	28	24
4	1010012579962	97022	97037	97042	5	20	16
5	1010012589660	97022	97030	97035	5	13	9
		97056	97070	97078	8	22	15
		97056	97070	97078	8	22	15
6	1010012589661	96263	97198	97204	6	306	301

		96263	97198	97205	7	307	301
		96263	97198	97205	7	307	301
		97030	97198	97205	7	175	169
7	1015011656212	97030	97044	97050	6	20	15
		97059	97072	97077	5	18	14
		97064	97083	97088	5	24	20
		97073	97084	97087	3	14	12
		97073	97087	97091	4	18	15
		97079	97111	97114	3	35	33
		97080	97120	97123	3	43	41
		97091	97111	97114	3	23	21
		97092	97120	97123	3	31	29
8	1240010380531	97175	97183	97189	6	14	9
		97183	97197	97200	3	17	15
		97196	97226	97234	8	38	31
9	1240010397273	97030	97043	97052	9	22	14
		97195	97267	97272	5	77	73
10	1240012018299	97044	97052	97056	4	12	9
		97051	97080	97088	8	37	30
		97108	97135	97141	6	33	28
11	1260012362158	96268	96173	97078	270	810	541
		97101	97129	97143	14	42	29
		97233	97257	97269	12	36	25
12	1290010377289	97129	97141	97148	7	19	13
		97139	97150	97155	5	16	12
		97183	97191	97198	7	15	9
13	1430010403750	97024	97052	97059	7	35	29
		96229	97036	97042	6	178	173
		96274	97044	97050	6	141	136
		97009	97041	97086	45	77	33
		97034	97049	97052	3	18	16
		97035	97084	97086	2	51	50
		97052	97084	97086	2	34	33
		97066	97084	97087	3	21	19
		97073	97084	97087	3	14	12
		97183	97216	97220	4	37	34
		97183	97216	97220	4	37	34
		97199	97216	97220	4	21	18
		97233	97252	97255	3	47	45
		97266	97288	97293	5	27	23
		97281	97294	97300	6	19	14
14	1440012156014	96325	97202	97205	3	245	243
		96351	97202	97205	3	219	217
		96351	97224	97232	8	246	239
		96351	97202	97205	3	219	217
		96351	97224	97232	8	246	239
		96351	97202	97205	3	219	217
		96351	97202	97205	3	219	217
		96351	97202	97205	3	219	217
		96351	97202	97205	3	219	217
		96351	97202	97205	3	219	217
		96351	97202	97205	3	219	217
		97035	97224	97232	8	197	190
15	2350011996319	97175	97182	97189	7	14	8
		97234	97245	97248	3	14	12
		97260	97273	97281	8	21	14

16	2510219083070	97030	97049	97051	2	21	20
		97059	97065	97071	6	12	7
		97059	97101	97106	5	47	43
		97062	97101	97106	5	44	40
		97066	97076	97079	3	13	11
		97066	97076	97079	3	13	11
		97066	97076	97079	3	34	32
		97114	97128	97133	5	19	15
		97183	97198	97204	6	21	16
		97183	97198	97204	6	21	16
17	2520000893773	96303	97101	97112	11	174	164
		96310	97111	97123	12	178	167
		96310	97176	97198	22	253	232
		96353	97219	97239	20	251	232
		97036	97063	97074	11	38	28
18	2520004507502	96337	97013	97042	29	70	42
		96340	97013	97042	29	67	39
		96340	97013	97042	29	67	39
		96354	97038	97043	5	54	50
		97223	97240	97246	6	23	18
		97254	97275	97280	5	26	22
		97260	97275	97280	5	20	16
19	2520011173010	97073	97086	97098	12	156	145
		97115	97128	97130	2	15	14
		97170	97182	97195	13	25	13
		97238	97248	97253	5	15	11
20	2520011343891	96268	97055	97057	2	154	153
		97195	97240	97241	1	46	46
21	2520011441528	97093	97113	97115	2	22	21
		97115	97128	97130	2	15	14
		97156	97177	97183	6	27	22
		97168	97177	97183	6	15	10
22	2520011448667	97156	97168	97171	3	15	13
		97168	97183	97199	16	31	16
		97175	97190	97195	5	20	16
		97234	97247	97252	5	18	14
23	2520011787149	97050	97064	97071	7	21	15
24	2530004385150	96269	97161	97163	2	259	258
		96312	97161	97163	2	216	215
		96330	97168	97171	3	207	205
		96351	97161	97163	2	177	176
		96351	97161	97163	2	177	176
		97056	97161	97163	2	107	106
		97087	97161	97163	2	76	75
		97087	97161	97163	2	76	75
25	2530004385156	96290	97176	97195	19	270	252
		96298	97176	97195	19	262	244
		97223	97265	97268	3	45	43
26	2530011418617	96214	97063	97071	8	222	215
		97036	97063	97065	2	22	21
		97104	97161	97163	2	59	58
		97104	97171	97178	7	74	68
27	2530012014816	97114	97132	97135	3	21	19
		97114	97132	97135	3	21	19
		97125	97134	97140	6	15	10
		97125	97134	97140	6	15	10

		97210	97220	97226	6	16	11
		97234	97247	97253	26	34	9
		97248	97258	97262	4	14	11
		97260	97281	97288	7	28	22
		97262	97282	97289	7	27	21
		97266	97281	97288	7	22	16
		97281	97294	97297	3	16	14
28	2815001780268	97016	97045	97060	15	44	30
		97254	97261	97265	4	11	8
29	2815011357475	97260	97275	97280	5	20	16
30	2815011408799	97049	97072	97074	2	25	24
		97161	97181	97224	43	63	21
		97240	97252	97258	6	18	13
31	2815011650478	96290	97021	97042	21	117	97
32	2815011867251	97262	97297	97302	5	40	36
33	2990001184942	97240	97253	97255	2	15	14
34	5820008920622	96263	96360	97044	49	146	98
		96263	97005	97059	54	161	108
		96303	97017	97057	40	119	80
		96347	97033	97059	26	77	52
		97009	97032	97044	12	35	24
35	5820009303725	97085	97094	97113	19	28	10
36	5820010692638	97010	97028	97038	10	28	19
		97013	97025	97038	13	25	13
37	5820012705099	97210	97219	97224	5	14	10
		97210	97227	97234	7	24	18
		97053	97073	97081	8	28	21
38	5820012868792	97009	97032	97044	12	35	24
		97014	97034	97044	10	30	21
		97014	97034	97044	10	30	21
39	5820013652725	96255	96988	97038	50	148	99
40	5830011385787	97034	97038	97043	5	9	5
		97154	97175	97190	15	36	22
41	5895010655044	97053	97063	97079	16	26	11
42	5895013343164	97210	97240	97251	11	41	31
43	5895013393686	97057	97067	97077	10	20	11
		97079	97098	97101	3	22	20
		97079	97092	97098	17	59	43
		97206	97294	97297	3	91	89
		97210	97294	97297	3	87	85
		97254	97289	97294	5	40	36
		97260	97294	97297	3	37	35
		97287	97297	97302	5	15	11
44	5985010504869	96347	97023	97044	21	62	42
45	5996011863699	97197	97247	97252	5	55	51
		97197	97247	97252	5	55	51
46	5998012545859	97274	97296	97302	6	28	23
		97281	97296	97301	5	20	16
47	5998012602527	97206	97213	97218	5	12	8
48	5998013581187	97136	97171	97182	11	46	36
49	5999010659011	97078	97094	97099	5	21	17
		97053	97059	97070	11	17	7
50	5999010661352	97030	97038	97043	5	13	9
		97058	97072	97077	5	19	15
		97058	97072	97077	116	297	182
		97101	97113	97116	3	197	195

		97148	97154	97157	3	9	7
		97175	97202	97205	3	30	28
51	5999012401249	97069	97108	97113	5	44	40
		97129	97175	97178	6	16	11
		97154	97175	97178	3	24	22
52	6150011029170	97129	97183	97190	7	165	159

APPENDIX A - INVENTORY SAVINGS

		COST OF INVENTORY					MONTHLY INCREMENTAL INVENTORY SAVINGS					
ITEM NO	NSN	GROUND RO	PREMIUM RO	CHANGE TO RO	U / P	T / P	INV	OBSOL	OTHER	STOR		INVENTORY HOLDING SAVINGS
1	1005011643558	127	125	2	37 26	74 52	0.62	0 09	0.56	0.06	=	1 33
2	1005012148884	27	27	0	600.00	0 00	0 00	0.00	0 00	0 00	=	0 00
3	1010012579961	17	17	0	2659 38	0 00	0 00	0.00	0.00	0.00	=	0.00
4	1010012579962	9	9	0	2388 17	0.00	0.00	0.00	0.00	0 00	=	0.00
5	1010012589660	8	8	0	4516.31	0.00	0 00	0.00	0 00	0.00	=	0 00
6	1010012589661	14	14	0	10925.00	0.00	0 00	0.00	0.00	0.00	=	0.00
7	1015011656212	17	17	0	2787.63	0 00	0 00	0.00	0.00	0 00	=	0.00
8	1240010380531	29	28	1	8191.00	8191.00	68.26	9.56	61.71	6.83	=	146 35
9	1240010397273	20	20	0	7324.00	0.00	0.00	0.00	0.00	0.00	=	0.00
10	1240012018299	58	57	1	1013 00	1013.00	8 44	1.18	7 63	0 84	=	18 10
11	1260012362158	16	16	0	51139.00	0.00	0 00	0.00	0.00	0 00	=	0.00
12	1290010377289	12	12	0	2702 00	0.00	0.00	0.00	0.00	0.00	=	0.00
13	1430010403750	15	15	0	2539 00	0.00	0.00	0 00	0.00	0.00	=	0.00
14	1440012156014	15	15	0	19186 00	0 00	0 00	0.00	0.00	0 00	=	0.00
15	2350011996319	30	30	0	4263 80	0 00	0.00	0.00	0.00	0 00	=	0.00
16	2510219083070	4	4	0	8365 69	0 00	0.00	0.00	0.00	0.00	=	0.00
17	2520000893773	32	32	0	5246.00	0 00	0.00	0 00	0.00	0.00	=	0.00
18	2520004507502	20	20	0	415 41	0 00	0.00	0 00	0.00	0.00	=	0.00
19	2520011173010	49	49	0	13163.00	0.00	0.00	0.00	0 00	0 00	=	0.00
20	2520011343891	25	25	0	33424 96	0.00	0 00	0.00	0.00	0.00	=	0.00
21	2520011441528	25	25	0	7603.00	0 00	0.00	0.00	0.00	0 00	=	0.00
22	2520011448667	7	7	0	13049.17	0.00	0 00	0 00	0 00	0.00	=	0.00
23	2520011787149	16	16	0	14719 99	0.00	0.00	0.00	0.00	0.00	=	0.00
24	2530004385150	6	6	0	6175.13	0.00	0.00	0.00	0 00	0.00	=	0.00
25	2530004385156	15	15	0	5835.01	0 00	0 00	0.00	0.00	0.00	=	0 00
26	2530011418617	11	11	0	40403 95	0 00	0.00	0.00	0.00	0 00	=	0.00
27	2530012014816	29	29	0	439 00	0.00	0.00	0.00	0.00	0.00	=	0.00
28	2815001780268	30	30	0	13833 00	0.00	0 00	0.00	0.00	0 00	=	0.00
29	2815011357475	25	25	0	1005.52	0.00	0 00	0.00	0.00	0.00	=	0.00
30	2815011408799	86	85	1	52902.10	52902 10	440.85	61.72	398.53	44 09	=	945.18
31	2815011650478	32	32	0	36324.92	0 00	0.00	0.00	0.00	0.00	=	0.00
32	2815011867251	42	42	0	28091.63	0.00	0.00	0.00	0.00	0.00	=	0.00
33	2990001184942	10	10	0	33129.91	0.00	0.00	0.00	0.00	0.00	=	0 00
34	5820008920622	88	88	0	7840.00	0.00	0.00	0.00	0.00	0.00	=	0.00
35	5820009303725	151	151	0	2122.00	0.00	0.00	0.00	0.00	0 00	=	0.00
36	5820010692638	87	87	0	15464.34	0 00	0.00	0.00	0.00	0.00	=	0 00
37	5820012705099	22	22	0	23246.06	0 00	0.00	0.00	0.00	0.00	=	0.00
38	5820012868792	45	44	1	9833 06	9833.06	81 94	11 47	74.08	8.19	=	175.68
39	5820013652725	138	132	6	6838.00	41028.00	341 90	47 87	309.08	34.19	=	733 03
40	5830011385787	54	54	0	645.10	0 00	0.00	0.00	0 00	0 00	=	0.00
41	5895010655044	37	36	1	5563.34	5563 34	46.36	6 49	41.91	4.64	=	99 40
42	5895013343164	42	42	0	1876.00	0 00	0.00	0.00	0.00	0 00	=	0.00
43	5895013393686	25	25	0	30937.97	0.00	0.00	0.00	0.00	0.00	=	0 00
44	5985010504869	33	33	0	4991 88	0.00	0.00	0.00	0 00	0.00	=	0.00
45	5996011863699	21	20	1	46513 07	46513.07	387.61	54 27	350 40	38 76	=	831.03
46	5998012545859	17	17	0	12931.62	0.00	0.00	0.00	0.00	0.00	=	0.00
47	5998012602527	6	6	0	3485.06	0.00	0.00	0.00	0.00	0.00	=	0.00
48	5998013581187	18	18	0	3704 36	0.00	0 00	0.00	0 00	0.00	=	0 00
49	5999010659011	43	43	0	4221.94	0 00	0 00	0 00	0.00	0 00	=	0 00
50	5999010661352	60	60	0	2027.90	0.00	0.00	0.00	0.00	0.00	=	0.00
51	5999012401249	0	0	0	630.00	0.00	0.00	0.00	0.00	0.00	=	0.00
52	6150011029170	12	12	0	2846.00	0 00	0.00	0.00	0 00	0.00	=	0.00
												2950.11

APPENDIX A - TRANSPORTATION COSTS

MONTHLY TRANSPORTATION REQUIREMENT				MONTHLY INCREMENTAL TRANSPORTATION COST						
ITEM NO	NSN	UNIT WEIGHT (LBS)	WASHOUT RATE	PREMIUM RATE	PREMIUM COST		GROUND RATE	GROUND COST		TRANSPORTATION COST
1	1005011643558	7	3	5.67	17.01	-	1.94	5.81	=	11.20
2	1005012148884	1	2	3.50	7.00	-	0.28	0.55	=	6.45
3	1010012579961	3	0	0.00	0.00	-	0.00	0.00	=	0.00
4	1010012579962	3	1	3.57	3.57	-	0.55	0.55	=	3.02
5	1010012589660	16	1	11.67	11.67	-	4.43	4.43	=	7.24
6	1010012589661	1	0	0.00	0.00	-	0.00	0.00	=	0.00
7	1015011656212	31	1	22.92	22.92	-	8.58	8.58	=	14.34
8	1240010380531	24	1	17.67	17.67	-	6.64	6.64	=	11.03
9	1240010397273	109	1	73.00	73.00	-	29.89	29.89	=	43.11
10	1240012018299	1	1	3.45	3.45	-	0.00	0.00	=	3.45
11	1260012362158	22	0	0.00	0.00	-	0.00	0.00	=	0.00
12	1290010377289	11	0	0.00	0.00	-	0.00	0.00	=	0.00
13	1430010403750	2	1	3.57	3.57	-	0.55	0.55	=	3.02
14	1440012156014	73	1	53.67	53.67	-	19.93	19.93	=	33.74
15	2350011996319	21	1	15.42	15.42	-	5.81	5.81	=	9.61
16	2510219083070	0	0	0.00	0.00	-	0.00	0.00	=	0.00
17	2520000893773	1000	1	830.00	830.00	-	163.46	163.46	=	666.54
18	2520004507502	390	1	327.60	327.60	-	86.35	86.35	=	241.25
19	2520011173010	1020	0	0.00	0.00	-	0.00	0.00	=	0.00
20	2520011343891	2875	1	2,386.25	2386.25	-	409.98	409.98	=	1976.28
21	2520011441528	1101	0	0.00	0.00	-	0.00	0.00	=	0.00
22	2520011448667	430	1	361.20	361.20	-	94.29	94.29	=	266.91
23	2520011787149	950	0	0.00	0.00	-	0.00	0.00	=	0.00
24	2530004385150	340	1	285.60	285.60	-	75.28	75.28	=	210.32
25	2530004385156	340	1	285.60	285.60	-	75.28	75.28	=	210.32
26	2530011418617	34	1	25.17	25.17	-	9.41	9.41	=	15.76
27	2530012014816	8	1	6.42	6.42	-	2.21	2.21	=	4.21
28	2815001780268	4370	1	3,627.10	3627.10	-	609.12	609.12	=	3017.98
29	2815011357475	57	0	0.00	0.00	-	0.00	0.00	=	0.00
30	2815011408799	3604	2	2,991.32	5982.64	-	513.93	1027.86	=	4954.78
31	2815011650478	2500	1	2,075.00	2075.00	-	356.50	356.50	=	1718.50
32	2815011867251	3109	1	2,580.47	2580.47	-	443.34	443.34	=	2137.13
33	2990001184942	370	0	0.00	0.00	-	0.00	0.00	=	0.00
34	5820008920622	76	0	0.00	0.00	-	0.00	0.00	=	0.00
35	5820009303725	13	0	0.00	0.00	-	0.00	0.00	=	0.00
36	5820010692638	0	1	3.45	3.45	-	0.00	0.00	=	3.45
37	5820012705099	13	1	9.72	9.72	-	3.60	3.60	=	6.12
38	5820012868792	13	1	9.72	9.72	-	3.60	3.60	=	6.12
39	5820013652725	0	2	3.45	6.90	-	0.00	0.00	=	6.90
40	5830011385787	4	1	3.67	3.67	-	1.11	1.11	=	2.56
41	5895010655044	4	1	3.67	3.67	-	1.11	1.11	=	2.56
42	5895013343164	37	0	0.00	0.00	-	0.00	0.00	=	0.00
43	5895013393686	0	1	3.45	3.45	-	0.00	0.00	=	3.45
44	5985010504869	41	1	30.42	30.42	-	11.35	11.35	=	19.07
45	5996011863699	55	3	40.92	122.76	-	15.22	45.67	=	77.09
46	5998012545859	0	0	0.00	0.00	-	0.00	0.00	=	0.00
47	5998012602527	0	1	3.45	3.45	-	0.00	0.00	=	3.45
48	5998013581187	0	0	0.00	0.00	-	0.00	0.00	=	0.00
49	5999010659011	0	1	3.45	3.45	-	0.00	0.00	=	3.45
50	5999010661352	0	1	3.45	3.45	-	0.00	0.00	=	3.45
51	5999012401249	4	0	0.00	0.00	-	0.00	0.00	=	0.00
52	6150011029170	8	0	0.00	0.00	-	0.00	0.00	=	0.00
										15,703.84

APPENDIX A - REPAIRABLE TRADEOFF

MONTHLY INCREMENTAL INVENTORY / TRANSPORTATION TRADEOFF

ITEM NO	NSN	MONTHLY INVENTORY HOLDING COST		MONTHLY TRANSPORTATION COST		MONTHLY TRADEOFF COST
1	1005011643558	1.33	-	11.20	=	(9.87)
2	1005012148884	0.00	-	6.45	=	(6.45)
3	1010012579961	0.00	-	0.00	=	0.00
4	1010012579962	0.00	-	3.02	=	(3.02)
5	1010012589660	0.00	-	7.24	=	(7.24)
6	1010012589661	0.00	-	0.00	=	0.00
7	1015011656212	0.00	-	14.34	=	(14.34)
8	1240010380531	146.35	-	11.03	=	135.32
9	1240010397273	0.00	-	43.11	=	(43.11)
10	1240012018299	18.10	-	3.45	=	14.65
11	1260012362158	0.00	-	0.00	=	0.00
12	1290010377289	0.00	-	0.00	=	0.00
13	1430010403750	0.00	-	3.02	=	(3.02)
14	1440012156014	0.00	-	33.74	=	(33.74)
15	2350011996319	0.00	-	9.61	=	(9.61)
16	2510219083070	0.00	-	0.00	=	0.00
17	2520000893773	0.00	-	666.54	=	(666.54)
18	2520004507502	0.00	-	241.25	=	(241.25)
19	2520011173010	0.00	-	0.00	=	0.00
20	2520011343891	0.00	-	1976.28	=	(1976.28)
21	2520011441528	0.00	-	0.00	=	0.00
22	2520011448667	0.00	-	266.91	=	(266.91)
23	2520011787149	0.00	-	0.00	=	0.00
24	2530004385150	0.00	-	210.32	=	(210.32)
25	2530004385156	0.00	-	210.32	=	(210.32)
26	2530011418617	0.00	-	15.76	=	(15.76)
27	2530012014816	0.00	-	4.21	=	(4.21)
28	2815001780268	0.00	-	3017.98	=	(3017.98)
29	2815011357475	0.00	-	0.00	=	0.00
30	2815011408799	945.18	-	4954.78	=	(4009.60)
31	2815011650478	0.00	-	1718.50	=	(1718.50)
32	2815011867251	0.00	-	2137.13	=	(2137.13)
33	2990001184942	0.00	-	0.00	=	0.00
34	5820008920622	0.00	-	0.00	=	0.00
35	5820009303725	0.00	-	0.00	=	0.00
36	5820010692638	0.00	-	3.45	=	(3.45)
37	5820012705099	0.00	-	6.12	=	(6.12)
38	5820012868792	175.68	-	6.12	=	169.56
39	5820013652725	733.03	-	6.90	=	726.13
40	5830011385787	0.00	-	2.56	=	(2.56)
41	5895010655044	99.40	-	2.56	=	96.84
42	5895013343164	0.00	-	0.00	=	0.00
43	5895013393686	0.00	-	3.45	=	(3.45)
44	5985010504869	0.00	-	19.07	=	(19.07)
45	5996011863699	831.03	-	77.09	=	753.95
46	5998012545859	0.00	-	0.00	=	0.00
47	5998012602527	0.00	-	3.45	=	(3.45)
48	5998013581187	0.00	-	0.00	=	0.00
49	5999010659011	0.00	-	3.45	=	(3.45)
50	5999010661352	0.00	-	3.45	=	(3.45)
51	5999012401249	0.00	-	0.00	=	0.00
52	6150011029170	0.00	-	0.00	=	0.00
		2950.11	-	15703.84	=	(12753.73)

APPENDIX B - CONSUMABLE DESCRIPTIONS

ITEM NO	NSN	NOMENCLATURE	CEC	SOS	SD	CITY	STATE	PRICE ($)	WEIGHT (LBS)	CUBE (FT)	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)
1	2510007368622	BRACKET AS	4	S9C	SAC	MECHANICSBURG	PA	3.36	0.0800	0.0060	0	0	0
2	2520011272624	SHAFT,SPEE	5	S9C	SAC	MECHANICSBURG	PA	17.41	0.2000	0.0350	0	0	0
3	2520011374843	SHIELD AND	5	S9C	SAC	MECHANICSBURG	PA	3.73	1.3700	0.0080	0	0	0
4	2530003401405	BLEEDER VA	5	S9C	SAC	MECHANICSBURG	PA	0.42	0.0200	0.0010	0	0	0
5	2530011271677	VALVE,BRAK	5	S9C	SAC	MECHANICSBURG	PA	117.92	0.0100	0.0001	0	0	0
6	2540010627132	DRIVE ADAP	5	S9C	SAC	MECHANICSBURG	PA	1.95	0.0100	0.0012	2	1	1
7	2540011026863	COVER,HALF	5	S9C	SNC	NEW CUMBERLAND	PA	13.53	0.2000	0.0104	3	3	2
8	2540011860969	MOTOR,WIND	3	S9C	SAC	MECHANICSBURG	PA	207.92	3.0000	0.1090	0	0	0
9	2590011689871	CONTROL AS	5	S9C	SAC	MECHANICSBURG	PA	20.64	0.0600	0.2639	19	12	2
10	2590011905604	ANNUNCIATO	5	S9C	SAC	MECHANICSBURG	PA	1199.67	4.5000	0.0960	0	0	0
11	2590012505009	ROD,RETAIN	2	S9C	SAC	MECHANICSBURG	PA	18.41	0.0200	0.0050	0	0	0
12	2940005370946	FILTER ELE	2	S9C	SAC	MECHANICSBURG	PA	1.6	0.1000	0.0060	0	0	0
13	3040010362989	CONNECTING	5	S9C	SAC	MECHANICSBURG	PA	18.32	0.0000	0.0000	0	0	0
14	3040012545288	SHAFT,SHOU	5	S9C	SAC	MECHANICSBURG	PA	253.91	0.0000	0.0000	0	0	0
15	3110001014194	BEARING,RO	5	S9I	SAI	MECHANICSBURG	PA	42.72	8.0000	0.0660	0	0	0
16	3120011176328	BUSHING,SL	5	S9I	SAI	MECHANICSBURG	PA	11.98	0.0600	0.0020	0	0	0
17	3439001321331	DESOLDERIN	2	S9G	SAI	MECHANICSBURG	PA	6.7	0.5500	0.0080	0	0	0
18	3439002528352	ROD,WELDIN	2	S9G	SAI	MECHANICSBURG	PA	2.73	1.0100	0.0000	0	0	0
19	3740006414719	SPRAYER,PE	1	S9G	SAG	MECHANICSBURG	PA	136.9	11.0000	1.3889	24	10	10
20	3805011783177	CUTTING ED	5	S9I	SAC	MECHANICSBURG	PA	82.48	100.0000	1.2280	0	0	0
21	3805013644471	PARTS KIT,	5	S9I	SAI	MECHANICSBURG	PA	142.2	2.4000	0.3240	0	0	0
22	3895002526896	REELING MA	1	S9I	SAI	MECHANICSBURG	PA	862.48	45.0000	24.4444	33	32	40
23	4010001293221	CHAIN,WELD	5	S9G	SAI	MECHANICSBURG	PA	8.83	5.6800	0.1250	0	0	0
24	4010005852108	CHAIN,WELD	5	S9G	SAI	MECHANICSBURG	PA	13.01	0.1000	0.0023	2	2	1
25	4010011096832	WIRE ROPE	5	S9G	SAG	MECHANICSBURG	PA	4.5	1.7500	0.2000	0	0	0
26	4030000019952	PLUG,WIRE	5	S9G	SAG	MECHANICSBURG	PA	5.94	0.2200	0.0012	2	1	1
27	4030009487315	HOOK,CHAIN	5	S9G	SNG	NEW CUMBERLAND	PA	0.16	0.0100	0.0010	0	0	0
28	4030010446040	SHACKLE	5	S9G	SAI	MECHANICSBURG	PA	7.84	0.1000	0.0070	0	0	0
29	4030011420456	SWAGING SL	2	S9G	SAI	MECHANICSBURG	PA	0.48	0.1000	0.0010	0	0	0
30	4110009247845	TRAY,ICE C	5	S9I	SAI	MECHANICSBURG	PA	0.83	0.0500	0.0060	0	0	0
31	4130001539266	PANEL,CONT	5	S9I	SAI	MECHANICSBURG	PA	220.23	0.0300	0.0000	0	0	0
32	4130001938488	FILTER ELE	5	S9I	SAI	MECHANICSBURG	PA	28.63	0.2000	0.0250	0	0	0
33	4130009510806	FILTER ELE	5	S9I	SAG	MECHANICSBURG	PA	8.45	2.0000	0.0110	0	0	0
34	4320009224933	COVER ASSE	5	S9C	SAC	MECHANICSBURG	PA	21.7	0.2500	0.0140	0	0	0
35	4320010981703	PARTS KIT,	5	S9C	SAC	MECHANICSBURG	PA	11.36	0.1300	0.0140	0	0	0
36	4330011310279	PARTS KIT,	5	S9C	SAC	MECHANICSBURG	PA	5.19	1.0000	0.0700	0	0	0
37	4330011643433	FILTER ELE	5	S9C	SAC	MECHANICSBURG	PA	20.34	2.4000	0.1300	0	0	0
38	4330011903579	FILTER ELE	3	S9C	SAC	MECHANICSBURG	PA	7.38	0.4300	0.0093	4	2	2
39	4710002000284	TUBE,METAL	5	S9C	SAC	MECHANICSBURG	PA	0.85	1.0000	0.0060	0	0	0
40	4710006099779	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	22.66	0.5000	0.2810	0	0	0
41	4710007409477	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	10.92	1.4900	0.7494	37	7	5
42	4710010053330	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	35.78	0.5000	0.0000	0	0	0
43	4710011883516	TUBE,BENT,	5	S9C	SAC	MECHANICSBURG	PA	8.92	0.2400	0.1597	0	0	0
44	4710011888780	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	5.49	1.4900	0.5494	0	0	0
45	4710013229315	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	35.19	8.7600	1.3704	37	8	8
46	4720001776157	HOSE,PREFO	5	S9C	SAC	MECHANICSBURG	PA	6.69	1.0200	0.1111	12	4	4
47	4720002039658	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	10.14	0.2500	0.0100	0	0	0
48	4720004613796	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	364.52	54.0000	2.5000	0	0	0
49	4720007059542	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	289.91	1.0000	0.0080	0	0	0
50	4720009641433	TUBING,NON	5	S9C	SAC	MECHANICSBURG	PA	26.2	31.0000	3.0000	0	0	0
51	4720009770316	HOSE,PREFO	5	S9C	SAC	MECHANICSBURG	PA	4.96	0.2600	0.0260	0	0	0
52	4720010673891	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	116.7	0.0000	0.0000	0	0	0
53	4720010889650	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	7.84	0.1200	0.1250	0	0	0
54	4720011233812	HOSE,NONME	5	S9C	SAC	MECHANICSBURG	PA	6.93	0.6300	0.0140	0	0	0
55	4720011560549	HOSE,NONME	2	S9C	SAC	MECHANICSBURG	PA	1.4	0.1000	0.0030	0	0	0
56	4720011797614	HOSE ASSEM	2	S9C	SAC	MECHANICSBURG	PA	26.13	0.0500	0.0180	0	0	0
57	4720011816796	HOSE,PREFO	5	S9C	SAC	MECHANICSBURG	PA	19.45	0.5000	0.0310	0	0	0
58	4720011929602	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	24.65	0.0000	0.0000	0	0	0
59	4720012122604	HOSE,NONME	5	S9C	SAC	MECHANICSBURG	PA	3.62	0.1000	0.0580	0	0	0
60	4720013252278	HOSE,NONME	5	S9C	SAC	MECHANICSBURG	PA	59.58	0.0100	0.0000	0	0	0
61	4730001188546	ELBOW,TUBE	5	S9C	SAC	MECHANICSBURG	PA	3.92	1.0000	0.0020	0	0	0
62	4730002028469	ADAPTER,ST	4	S9C	SAC	MECHANICSBURG	PA	3.16	0.3000	0.0220	0	0	0
63	4730002660538	ADAPTER,ST	4	S9C	SAC	MECHANICSBURG	PA	0.34	0.0800	0.0100	0	0	0
64	4730003962962	CONNECTOR,	5	S9C	SNC	NEW CUMBERLAND	PA	4.76	0.0100	0.0010	0	0	0
65	4730004926040	ADAPTER,ST	3	S9C	SAC	MECHANICSBURG	PA	2.37	0.1300	0.0012	2	1	1
66	4730005416584	CLAMP,HOSE	4	S9C	SAC	MECHANICSBURG	PA	0.18	0.1000	0.0010	0	0	0
67	4730006047953	PLUG,PIPE	5	S9C	SAC	MECHANICSBURG	PA	0.53	0.1000	0.0090	0	0	0
68	4730007205002	REDUCER,PI	2	S9C	SAC	MECHANICSBURG	PA	6.71	0.5400	0.0020	0	0	0
69	4730008137811	TEE,PIPE T	5	S9C	SAC	MECHANICSBURG	PA	2.71	0.0100	0.0010	0	0	0
70	4730010057253	CLAMP,HOSE	5	S9C	SAC	MECHANICSBURG	PA	0.22	0.0100	0.0010	0	0	0
71	4730010707680	ELBOW,PIPE	5	S9C	SAC	MECHANICSBURG	PA	2.02	0.1000	0.0010	0	0	0
72	4730010836059	CLAMP,HOSE	5	S9C	SAC	MECHANICSBURG	PA	11.68	0.0000	0.0000	0	0	0
73	4730010900258	CLAMP,HOSE	5	S9C	SAC	MECHANICSBURG	PA	0.46	0.0100	0.0010	0	0	0
74	4730010996474	PLUG,TUBE	5	S9C	SAC	MECHANICSBURG	PA	4	0.1500	0.0104	3	3	2
75	4730011173837	CLAMP,HOSE	5	S9C	SNC	NEW CUMBERLAND	PA	0.76	0.0600	0.0090	0	0	0
76	4730011196895	TEE,PIPE T	5	S9C	SAC	MECHANICSBURG	PA	3.36	0.3000	0.0020	0	0	0
77	4730011340854	ADAPTER,ST	5	S9C	SAC	MECHANICSBURG	PA	1.06	0.0100	0.0010	0	0	0
78	4730011549942	PLUG,PIPE	5	S9C	SAC	MECHANICSBURG	PA	9.46	0.5000	0.0050	0	0	0
79	4820011589223	COCK,DRAIN	4	S9C	SAC	MECHANICSBURG	PA	16.52	0.0000	0.0000	0	0	0
80	4930004707354	SLEEVE ASS	5	S9C	SAC	MECHANICSBURG	PA	91.35	0.0100	0.0010	0	0	0
81	5305000213620	SCREW,CAP,	2	S9I	SAI	MECHANICSBURG	PA	0.09	0.0300	0.0010	0	0	0
82	5305000425567	SCREW,ASSE	5	S9I	SAI	MECHANICSBURG	PA	0.19	0.0100	0.0010	0	0	0
83	5305000593664	SCREW,MACH	3	S9I	SAI	MECHANICSBURG	PA	14.88	0.0100	0.0010	0	0	0

APPENDIX B - CONSUMABLE RO EQUATION

Ground Simulation

RO = [(OST + SL + OL) / 30] X AMRD

ITEM NO	NSN	OST	SL	OL	AMRD	RO
1	2510007368622	24	15	60	0	2
2	2520011272624	13	30	60	1	6
3	2520011374843	13	30	60	0	2
4	2530003401405	5	30	60	0	0
5	2530011271677	5	30	60	0	0
6	2540010627132	12	30	60	12	41
7	2540011026863	21	30	60	0	2
8	2540011860969	24	15	60	56	185
9	2590011689871	17	30	60	12	42
10	2590011905604	18	30	60	1	4
11	2590012505009	20	15	60	0	1
12	2940005370946	21	15	60	41	130
13	3040010362989	16	30	60	0	0
14	3040012545288	12	30	60	3	12
15	3110001014194	20	30	60	9	34
16	3120011176328	18	30	60	2	6
17	3439001321331	22	15	60	2	9
18	3439002528352	14	15	60	7	22
19	3740006414719	5	15	60	0	0
20	3805011783177	22	30	60	0	0
21	3805013644471	5	30	60	0	0
22	3895002526896	5	15	60	0	0
23	4010001293221	36	30	60	4	19
24	4010005852108	14	30	60	1	4
25	4010011096832	21	30	60	1	4
26	4030000019952	24	30	60	1	6
27	4030009487315	21	30	60	1	2
28	4030010446040	23	30	60	0	0
29	4030011420456	13	15	60	1	3
30	4110009247845	162	30	60	1	8
31	4130001539266	15	30	60	0	0
32	4130001938488	16	30	60	1	4
33	4130009510806	35	30	60	1	5
34	4320009224933	98	30	60	5	31
35	4320010981703	13	30	60	0	2
36	4330011310279	22	30	60	3	12
37	4330011643433	26	30	60	4	15
38	4330011903579	56	15	60	16	69
39	4710002000284	23	30	60	1	4
40	4710006099779	11	30	60	0	0
41	4710007409477	5	30	60	0	0
42	4710010053330	50	30	60	2	8
43	4710011883516	16	30	60	0	1
44	4710011888780	16	30	60	1	4
45	4710013229315	5	30	60	0	0
46	4720001776157	12	30	60	0	0
47	4720002039658	5	30	60	0	0
48	4720004613796	23	30	60	1	4
49	4720007059542	18	30	60	0	0
50	4720009641433	43	30	60	1	5
51	4720009770316	22	30	60	1	3
52	4720010673891	44	30	60	1	5

53	4720010889650	19	30	60	1	4
54	4720011233812	5	30	60	0	0
55	4720011560549	5	15	60	0	0
56	4720011797614	8	15	60	2	6
57	4720011816796	15	30	60	1	4
58	4720011929602	15	30	60	0	0
59	4720012122604	14	30	60	1	4
60	4720013252278	5	30	60	0	0
61	4730001188546	17	30	60	1	4
62	4730002028469	14	15	60	0	0
63	4730002660538	14	15	60	3	10
64	4730003962962	14	30	60	0	0
65	4730004926040	20	15	60	16	51
66	4730005416584	14	15	60	5	14
67	4730006047953	18	30	60	2	9
68	4730007205002	21	15	60	0	0
69	4730008137811	15	30	60	0	0
70	4730010057253	5	30	60	0	0
71	4730010707680	5	30	60	0	0
72	4730010836059	13	30	60	0	0
73	4730010900258	17	30	60	5	17
74	4730010996474	19	30	60	1	4
75	4730011173837	48	30	60	5	24
76	4730011196895	17	30	60	1	4
77	4730011340854	12	30	60	2	6
78	4730011549942	15	30	60	3	11
79	4820011589223	14	15	60	1	3
80	4930004707354	13	30	60	0	0
81	5305000213620	14	15	60	2	6
82	5305000425567	26	30	60	6	22
83	5305000593664	14	15	60	3	9

RO = Requisitioning Objective
RR = Repair Rate
RCT = Repair Cycle Time
OST=Order Ship Time
SL=Safety Level
OL=Operating Level
AMRD=Average Monthtly Recurring

APPENDIX B - CONSUMABLE RO EQUATION

Premium Simulation

RO = [(OST + SL + OL) / 30] X AMRD

ITEM NO	NSN	OST	SL	OL	AMRD	RO
1	2510007368622	14	15	60	0	2
2	2520011272624	7	30	60	1	5
3	2520011374843	9	30	60	0	2
4	2530003401405	5	30	60	0	0
5	2530011271677	5	30	60	0	0
6	2540010627132	8	30	60	12	39
7	2540011026863	9	30	60	0	1
8	2540011860969	15	15	60	56	167
9	2590011689871	11	30	60	12	39
10	2590011905604	13	30	60	1	4
11	2590012505009	16	15	60	0	1
12	2940005370946	16	15	60	41	123
13	3040010362989	16	30	60	0	0
14	3040012545288	12	30	60	3	12
15	3110001014194	13	30	60	9	32
16	3120011176328	10	30	60	2	6
17	3439001321331	14	15	60	2	8
18	3439002528352	6	15	60	7	20
19	3740006414719	5	15	60	0	0
20	3805011783177	7	30	60	0	0
21	3805013644471	5	30	60	0	0
22	3895002526896	5	15	60	0	0
23	4010001293221	23	30	60	4	17
24	4010005852108	7	30	60	1	4
25	4010011096832	17	30	60	1	4
26	4030000019952	15	30	60	1	5
27	4030009487315	15	30	60	1	2
28	4030010446040	4	30	60	0	0
29	4030011420456	7	15	60	1	3
30	4110009247845	156	30	60	1	8
31	4130001539266	5	30	60	0	0
32	4130001938488	8	30	60	1	4
33	4130009510806	22	30	60	1	5
34	4320009224933	94	30	60	5	30
35	4320010981703	13	30	60	0	2
36	4330011310279	13	30	60	3	11
37	4330011643433	15	30	60	4	14
38	4330011903579	34	15	60	16	58
39	4710002000284	12	30	60	1	4
40	4710006099779	5	30	60	0	0
41	4710007409477	5	30	60	0	0
42	4710010053330	47	30	60	2	8
43	4710011883516	7	30	60	0	1
44	4710011888780	9	30	60	1	4
45	4710013229315	5	30	60	0	0
46	4720001776157	8	30	60	0	0
47	4720002039658	5	30	60	0	0
48	4720004613796	16	30	60	1	4
49	4720007059542	10	30	60	0	0
50	4720009641433	37	30	60	1	5
51	4720009770316	10	30	60	1	3
52	4720010673891	39	30	60	1	5

53	4720010889650	9	30	60	1	4
54	4720011233812	5	30	60	0	0
55	4720011560549	5	15	60	0	0
56	4720011797614	5	15	60	2	6
57	4720011816796	7	30	60	1	4
58	4720011929602	2	30	60	0	0
59	4720012122604	6	30	60	1	4
60	4720013252278	6	30	60	0	0
61	4730001188546	12	30	60	1	3
62	4730002028469	9	15	60	0	0
63	4730002660538	8	15	60	3	9
64	4730003962962	4	30	60	0	0
65	4730004926040	15	15	60	16	48
66	4730005416584	9	15	60	5	13
67	4730006047953	7	30	60	2	9
68	4730007205002	1	15	60	0	0
69	4730008137811	3	30	60	0	0
70	4730010057253	5	30	60	0	0
71	4730010707680	5	30	60	0	0
72	4730010836059	4	30	60	0	0
73	4730010900258	8	30	60	5	16
74	4730010996474	5	30	60	1	4
75	4730011173837	29	30	60	5	21
76	4730011196895	9	30	60	1	4
77	4730011340854	6	30	60	2	6
78	4730011549942	4	30	60	3	10
79	4820011589223	6	15	60	1	3
80	4930004707354	8	30	60	0	0
81	5305000213620	9	15	60	2	6
82	5305000425567	19	30	60	6	21
83	5305000593664	5	15	60	3	8

RO = Requisitioning Objective
RR = Repair Rate
RCT = Repair Cycle Time
OST=Order Ship Time
SL=Safety Level
OL=Operating Level
AMRD=Average Monthtly Recurring

APPENDIX B - AMRD DATA

ITEM NO	MONTHTLY DEMAND FOR EACH NSN	APR 96	MAY 96	JUN 96	JUL 96	AUG 96	SEP 96	OCT 96	NOV 96	DEC 96	JAN 97	FEB 97	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	2510007368622	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2520011272624	0	0	14	0	6	0	0	0	0	8	0	0	0	0	0	0	0	0
3	2520011374843	5	0	4	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
4	2530003401405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2530011271677	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2540010627132	0	0	0	0	12	0	12	0	0	94	0	30	0	0	0	0	0	0
7	2540011026863	0	5	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
8	2540011860969	0	0	0	180	0	208	8	0	80	292	0	0	0	0	0	0	0	0
9	2590011689871	4	20	35	0	10	0	0	0	0	75	0	30	0	0	0	0	0	0
10	2590011905604	0	0	0	0	8	0	0	0	0	0	0	8	0	0	0	0	0	0
11	2590012505009	0	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
12	2940005370946	8	0	212	60	156	0	0	234	0	0	20	0	0	0	0	0	0	0
13	3040010362989	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	3040012545288	0	0	2	0	2	38	0	0	0	0	0	0	0	0	0	0	0	0
15	3110001014194	0	0	20	12	28	0	0	0	18	36	22	0	0	0	0	0	0	0
16	3120011176328	0	0	0	0	4	10	0	0	0	0	0	4	0	0	0	0	0	0
17	3439001321331	90	0	10	10	0	0	0	7	0	0	0	0	0	0	0	0	0	0
18	3439002528352	0	0	0	20	10	0	0	0	0	66	0	0	0	0	0	0	0	0
19	3740006414719	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	3805011783177	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
21	3805013644471	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	3895002526896	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	4010001293221	0	0	0	8	6	2	12	0	0	14	12	0	0	0	0	0	0	0
24	4010005852108	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
25	4010011096832	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
26	4030000019952	0	6	0	0	6	0	0	0	0	0	6	0	0	0	0	0	0	0
27	4030009487315	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	4030010446040	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
29	4030011420456	0	0	0	0	0	0	0	3	2	0	2	0	0	0	0	0	0	0
30	4110009247845	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
31	4130001539266	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
32	4130001938488	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	0	0	0
33	4130009510806	0	0	6	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0
34	4320009224933	0	0	6	4	68	0	0	0	0	0	0	0	0	0	0	0	0	0
35	4320010981703	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	4330011310279	2	0	8	2	16	2	0	0	0	17	0	0	0	0	0	0	0	0
37	4330011643433	0	22	15	50	4	0	0	0	0	0	0	0	0	0	0	0	0	0
38	4330011903579	728	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0
39	4710002000284	0	1	0	0	1	1	0	0	5	0	0	0	0	0	0	0	0	0
40	4710006099779	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
41	4710007409477	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	4710010053330	0	2	0	0	15	0	0	1	5	0	0	0	0	0	0	0	0	0
43	4710011883516	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
44	4710011888780	0	0	0	0	0	0	0	6	4	0	0	0	0	0	0	0	0	0
45	4710013229315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	4720001776157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	4720002039658	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	4720004613796	0	1	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
49	4720007059542	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	4720009641433	0	0	0	0	0	0	0	3	0	0	2	2	0	0	0	0	0	0
51	4720009770316	0	1	1	0	1	0	1	0	4	0	0	0	0	0	0	0	0	0
52	4720010673891	0	0	0	0	0	0	0	0	6	0	3	3	0	0	0	0	0	0
53	4720010889650	0	0	0	0	0	0	0	6	4	4	0	0	0	0	0	0	0	0
54	4720011233812	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	4720011560549	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	4720011797614	0	0	0	0	0	0	0	0	14	0	0	12	0	0	0	0	0	0
57	4720011816796	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0
58	4720011929602	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
59	4720012122604	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
60	4720013252278	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	4730001188546	0	0	6	0	0	4	0	0	0	0	0	2	0	0	0	0	0	0
62	4730002028469	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
63	4730002660538	0	0	8	0	9	0	9	0	17	0	0	0	0	0	0	0	0	0
64	4730003962962	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
65	4730004926040	4	0	40	0	24	60	0	68	0	28	4	0	0	0	0	0	0	0
66	4730005416584	0	0	26	0	9	0	0	11	0	25	0	0	0	0	0	0	0	0
67	4730006047953	0	0	0	5	3	0	8	0	15	0	0	0	0	0	0	0	0	0
68	4730007205002	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
69	4730008137811	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
70	4730010057253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	4730010707680	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	4730010836059	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
73	4730010900258	0	0	0	0	0	24	30	0	0	0	0	0	0	0	0	0	0	0

74	4730010996474	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0
75	4730011173837	0	0	14	0	12	0	0	12	8	0	0	22	0	0	0	0	0	0
76	4730011196895	0	0	0	0	0	0	0	6	4	0	0	6	0	0	0	0	0	0
77	4730011340854	0	0	0	0	12	0	0	0	10	0	0	0	0	0	0	0	0	0
78	4730011549942	0	0	0	0	0	13	0	0	6	7	15	0	0	0	0	0	0	0
79	4820011589223	0	0	0	0	0	0	0	5	4	0	7	0	0	0	0	0	0	0
80	4930004707354	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
81	5305000213620	0	0	0	0	0	0	0	5	0	0	13	0	0	0	0	0	0	0
82	5305000425567	0	0	17	0	15	0	0	21	25	0	2	0	0	0	0	0	0	0
83	5305000593664	0	0	0	0	0	0	0	23	15	0	0	0	0	0	0	0	0	0

APPENDIX B - AMRD DATA

ITEM NO	12-MONTH AVG DEMAND FOR EACH NSN	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	2510007368622	1	1	1	0	0	0	0
2	2520011272624	2	2	2	1	1	1	1
3	2520011374843	1	1	1	0	0	0	0
4	2530003401405	0	0	0	0	0	0	0
5	2530011271677	0	0	0	0	0	0	0
6	2540010627132	12	12	12	12	12	11	11
7	2540011026863	1	1	0	0	0	0	0
8	2540011860969	64	64	64	64	49	49	32
9	2590011689871	15	14	13	10	10	9	9
10	2590011905604	1	1	1	1	1	1	1
11	2590012505009	1	1	0	0	0	0	0
12	2940005370946	58	57	57	39	34	21	21
13	3040010362989	0	0	0	0	0	0	0
14	3040012545288	4	4	4	3	3	3	0
15	3110001014194	11	11	11	10	9	6	6
16	3120011176328	2	2	2	2	2	1	0
17	3439001321331	10	2	2	1	1	1	1
18	3439002528352	8	8	8	8	6	6	6
19	3740006414719	0	0	0	0	0	0	0
20	3805011783177	0	0	0	0	0	0	0
21	3805013644471	0	0	0	0	0	0	0
22	3895002526896	0	0	0	0	0	0	0
23	4010001293221	5	5	5	5	4	3	3
24	4010005852108	1	1	1	1	1	1	1
25	4010011096832	1	1	1	1	1	1	1
26	4030000019952	2	2	1	1	1	1	1
27	4030009487315	2	2	0	0	0	0	0
28	4030010446040	0	0	0	0	0	0	0
29	4030011420456	1	1	1	1	1	1	1
30	4110009247845	1	1	1	1	1	1	0
31	4130001539266	0	0	0	0	0	0	0
32	4130001938488	1	1	1	1	1	1	1
33	4130009510806	2	2	2	1	1	0	0
34	4320009224933	7	7	7	6	6	0	0
35	4320010981703	1	1	1	0	0	0	0
36	4330011310279	4	4	4	3	3	2	1
37	4330011643433	8	8	6	5	0	0	0
38	4330011903579	67	6	6	6	6	6	6
39	4710002000284	1	1	1	1	1	1	0
40	4710006099779	0	0	0	0	0	0	0
41	4710007409477	0	0	0	0	0	0	0
42	4710010053330	2	2	2	2	2	1	1
43	4710011883516	1	0	0	0	0	0	0
44	4710011888780	1	1	1	1	1	1	1
45	4710013229315	0	0	0	0	0	0	0
46	4720001776157	0	0	0	0	0	0	0
47	4720002039658	0	0	0	0	0	0	0
48	4720004613796	1	1	1	1	1	1	1
49	4720007059542	0	0	0	0	0	0	0
50	4720009641433	1	1	1	1	1	1	1
51	4720009770316	1	1	1	1	1	0	0
52	4720010673891	1	1	1	1	1	1	1
53	4720010889650	1	1	1	1	1	1	1
54	4720011233812	0	0	0	0	0	0	0
55	4720011560549	0	0	0	0	0	0	0
56	4720011797614	2	2	2	2	2	2	2
57	4720011816796	1	1	1	1	1	1	1
58	4720011929602	0	0	0	0	0	0	0
59	4720012122604	1	1	1	1	1	1	1
60	4720013252278	0	0	0	0	0	0	0
61	4730001188546	1	1	1	1	1	1	0
62	4730002028469	0	0	0	0	0	0	0
63	4730002660538	4	4	4	3	3	2	2
64	4730003962962	0	0	0	0	0	0	0
65	4730004926040	19	19	19	15	15	13	8
66	4730005416584	6	6	6	4	4	3	3
67	4730006047953	3	3	3	3	2	2	2
68	4730007205002	0	0	0	0	0	0	0
69	4730008137811	0	0	0	0	0	0	0
70	4730010057253	0	0	0	0	0	0	0
71	4730010707680	0	0	0	0	0	0	0
72	4730010836059	0	0	0	0	0	0	0
73	4730010900258	5	5	5	5	5	5	3

74	4730010996474	1	1	1	1	1	1	1
75	4730011173837	6	6	6	5	5	4	4
76	4730011196895	1	1	1	1	1	1	1
77	4730011340854	2	2	2	2	2	1	1
78	4730011549942	3	3	3	3	3	3	2
79	4820011589223	1	1	1	1	1	1	1
80	4930004707354	0	0	0	0	0	0	0
81	5305000213620	2	2	2	2	2	2	2
82	5305000425567	7	7	7	5	5	4	4
83	5305000593664	3	3	3	3	3	3	3

APPENDIX B - OST DATA

ITEM NO	NSN	SMU QTY	SMU ORDER	SMU RECPT	CUST TRANSIT	GROUND SMU OST	PREMIUM SMU OST
1	2510007368622	8	6169	6193	11	24	14
2	2520011272624	7	6169	6180	5	11	7
		7	6169	6180	9	11	3
		3	6263	6276	7	13	7
		3	6263	6276	7	13	7
		4	7029	7044	8	15	8
		4	7029	7044	6	15	10
3	2520011374843	5	6117	6131	5	14	10
		4	6169	6180	5	11	7
		3	6263	6276	5	13	9
4	2530003401405	0	N/A	N/A	N/A	N/A	N/A
5	2530011271677	0	N/A	N/A	N/A	N/A	N/A
6	2540010627132	2	6233	6250	14	17	4
		2	6233	6250	13	17	5
		2	6233	6250	13	17	5
		2	6233	6250	3	17	15
		2	6233	6250	5	17	13
		2	6233	6250	10	17	8
		2	6305	6319	10	14	5
		2	6305	6319	6	14	9
		2	6305	6319	11	14	4
		2	6305	6319	6	14	9
		2	6305	6319	8	14	7
		2	6305	6319	7	14	8
		14	7029	7044	10	15	6
		14	7029	7044	6	15	10
		14	7029	7044	13	15	3
		14	7029	7044	13	15	3
		14	7029	7044	14	15	2
		14	7029	7044	7	15	9
		5	7070	7076	4	6	3
		5	7070	7076	4	6	3
		5	7070	7076	3	6	4
		5	7070	7076	3	6	4
		5	7070	7076	3	6	4
		5	7070	7076	3	6	4
7	2540011026863	5	6135	6156	15	21	7
		2	6339	6365	15	26	12
		2	7029	7044	8	15	8
8	2540011860969	45	6204	6215	8	11	4
		45	6204	6215	1	11	11
		45	6204	6215	5	11	7
		45	6204	6215	8	11	4
		50	6265	6276	8	11	4
		50	6265	6276	8	11	4
		50	6265	6276	3	11	9
		50	6265	6276	8	11	4
		4	6270	6291	11	21	11
		4	6270	6291	10	21	12
		4	6270	6291	11	21	11
		4	6270	6291	11	21	11
		2	6274	6292	7	18	12
		2	6274	6292	7	18	12
		2	6274	6292	7	18	12
		2	6274	6292	6	18	13
		10	6339	6365	8	26	19
		10	6339	6365	3	26	24
		10	6339	6365	19	26	8
		10	6339	6365	11	26	16
		10	6347	7041	10	59	50
		10	6347	7041	11	59	49
		10	6347	7041	11	59	49
		10	6347	7041	10	59	50
		73	7023	7030	5	7	3
		73	7023	7030	5	7	3
		73	7023	7030	5	7	3
		73	7023	7030	4	7	4
9	2590011689871	1	6103	6128	9	25	17
		1	6103	6128	7	25	19
		1	6103	6128	8	25	18
		1	6103	6128	11	25	15
		1	6103	6128	8	25	18
		4	6135	6152	9	17	9
		4	6135	6152	6	17	12
		4	6135	6152	9	17	9
		4	6135	6152	7	17	11
		4	6135	6152	8	17	10
		2	6159	6176	11	17	7
		2	6159	6176	8	17	10
		2	6159	6176	9	17	9
		2	6159	6176	6	17	12
		2	6159	6176	9	17	9
		5	6169	6193	7	24	18

		5	6169	6193	8	24	17
		5	6169	6193	11	24	14
		5	6169	6193	8	24	17
		5	6169	6193	9	24	16
		3	6171	6193	11	22	12
		3	6171	6193	9	22	14
		3	6171	6193	6	22	17
		3	6171	6193	9	22	14
		3	6171	6193	7	22	16
		2	6242	6256	8	14	7
		2	6242	6256	11	14	4
		2	6242	6256	8	14	7
		2	6242	6256	9	14	6
		2	6242	6256	6	14	9
		7	7007	7023	7	16	10
		7	7007	7023	8	16	9
		7	7007	7023	9	16	8
		7	7007	7023	8	16	9
		7	7007	7023	9	16	8
		1	7023	7036	6	13	8
		1	7023	7036	7	13	7
		1	7023	7036	8	13	6
		1	7023	7036	11	13	3
		1	7023	7036	8	13	6
		7	7029	7034	4	5	2
		7	7029	7034	6	5	0
		7	7029	7034	4	5	2
		7	7029	7034	6	5	0
		7	7029	7034	3	5	3
		6	7064	7086	8	22	15
		6	7064	7086	7	22	16
		6	7064	7086	8	22	15
		6	7064	7086	9	22	14
		6	7064	7086	6	22	17
10	2590011905604	4	6233	6249	7	16	10
		4	6233	6249	4	16	13
		4	6233	6249	4	16	13
		4	6233	6249	5	16	12
		2	7064	7084	6	20	15
		2	7064	7084	6	20	15
		2	7064	7084	7	20	14
		2	7064	7084	8	20	13
11	2590012505009	3	6121	6152	9	31	23
		4	7051	7062	3	11	9
12	2940005370946	2	6103	6121	4	18	15
		2	6103	6121	7	18	12
		2	6103	6121	9	18	10
		2	6103	6121	5	18	14
		36	6171	6239	4	68	65
		36	6171	6239	7	68	62
		36	6171	6239	9	68	60
		36	6171	6239	12	68	57
		17	6179	6192	6	13	8
		17	6179	6192	9	13	5
		17	6179	6192	7	13	7
		17	6179	6192	4	13	10
		15	6204	6213	4	9	6
		15	6204	6213	4	9	6
		15	6204	6213	4	9	6
		15	6204	6213	7	9	3
		39	6242	6254	7	12	6
		39	6242	6254	7	12	6
		39	6242	6254	9	12	4
		39	6242	6254	9	12	4
		78	6305	6320	9	15	7
		78	6305	6320	5	15	11
		78	6305	6320	7	15	9
		78	6305	6320	6	15	10
		5	7039	7055	8	16	9
		5	7039	7055	9	16	8
		5	7039	7055	8	16	9
		5	7039	7055	12	16	5
13	3040010362989	4	6135	6151	10	16	7
14	3040012545288	2	6171	6190	2	19	18
		2	6242	6249	1	7	7
		2	6265	6276	1	11	11
15	3110001014194	10	6169	6185	12	16	5
		10	6169	6185	7	16	10
		6	6202	6226	9	24	16
		6	6202	6226	8	24	17
		14	6242	6257	7	15	9
		14	6242	6257	5	15	11
		7	6263	6276	4	13	10
		7	6263	6276	3	13	11
		12	6264	6274	7	10	4
		12	6264	6274	6	10	5

		9	6347	6394	9	47	39
		9	6347	6394	8	47	40
		18	7007	7023	7	16	10
		18	7007	7023	5	16	12
		11	7039	7055	4	16	13
		11	7039	7055	3	16	14
16	3120011176328	2	6228	6243	11	15	5
		2	6228	6243	13	15	3
		5	6264	6282	7	18	12
		5	6264	6282	10	18	9
		2	7064	7086	7	22	16
		2	7064	7086	9	22	14
17	3439001321331	10	6108	6114	4	6	3
		9	6117	6185	12	68	57
		4	6159	6173	13	14	2
		6	6169	6183	7	14	8
		10	6194	6214	14	20	7
		7	6313	6332	13	19	7
18	3439002528352	10	6194	6205	11	11	1
		10	6194	6205	10	11	2
		5	6264	6277	9	13	5
		5	6264	6277	11	13	3
		33	7016	7034	10	18	9
		33	7016	7034	11	18	8
19	3740006414719	0	N/A	N/A	N/A	N/A	N/A
20	3805011783177	2	6233	6255	16	22	7
21	3805013644471	0	N/A	N/A	N/A	N/A	N/A
22	3895002526896	0	N/A	N/A	N/A	N/A	N/A
23	4010001293221	4	6204	6221	14	17	4
		4	6204	6221	8	17	10
		3	6242	6255	12	13	2
		3	6242	6255	6	13	8
		1	6265	6282	11	17	7
		1	6265	6282	9	17	9
		1	6274	6298	4	24	21
		1	6274	6298	6	24	19
		5	6297	7077	12	145	134
		5	6297	7077	14	145	132
		7	7007	7023	11	16	6
		7	7007	7023	9	16	8
		6	7039	7051	4	12	9
		6	7039	7051	6	12	7
24	4010005852108	3	6326	6341	11	15	5
		3	6326	6341	8	15	8
		3	6326	6341	12	15	4
		2	6339	6353	5	14	10
		2	6339	6353	9	14	6
		2	6339	6353	8	14	7
25	4010011096832	5	7029	7050	3	21	19
		5	7029	7050	7	21	15
26	4030000019952	2	6121	6158	9	37	29
		2	6121	6158	16	37	22
		2	6121	6158	5	37	33
		1	6228	6256	9	28	20
		1	6228	6256	10	28	19
		1	6228	6256	9	28	20
		1	6233	6249	9	16	8
		1	6233	6249	7	16	10
		1	6233	6249	5	16	12
		2	7051	7063	9	12	4
		2	7051	7063	10	12	3
		2	7051	7063	9	12	4
27	4030009487315	7	6135	6156	2	21	20
		7	6135	6156	5	21	17
		7	6135	6156	13	21	9
28	4030010446040	1	6121	6155	13	34	22
		2	7039	7051	9	12	4
29	4030011420456	3	6326	6340	5	14	10
		2	6339	6351	10	12	3
		2	7051	7065	8	14	7
30	4110009247845	6	6121	6267	7	146	140
		6	6270	7084	7	179	173
31	4130001539266	5	6326	6341	11	15	5
32	4130001938488	5	6326	6340	10	14	5
		4	6339	6358	10	19	10
33	4130009510806	6	6169	6184	3	15	13
		4	6194	6267	14	73	60
		4	6228	6241	3	13	11
		4	6270	6291	13	21	9
34	4320009224933	2	6171	6276	4	105	102
		2	6171	6276	3	105	103
		1	6179	6268	3	89	87
		1	6179	6268	4	89	86
		2	6204	7076	3	237	235
		2	6204	7076	3	237	235
		17	6241	6268	3	27	25

APPENDIX B - OST DATA

		17	6241	6268	4	27	24
		17	6242	6268	3	26	24
		17	6242	6268	5	26	22
35	4320010981703	3	6169	6180	7	11	5
		4	6178	6194	5	16	12
36	4330011310279	2	6103	6121	9	18	10
		8	6169	6193	9	24	16
		2	6204	6226	9	22	14
		14	6228	6241	12	13	2
		2	6242	6256	9	14	6
		2	6265	6282	12	17	6
		17	7007	7052	9	45	37
37	4330011643433	22	6134	6152	13	18	6
		6	6171	6190	16	19	4
		9	6178	6197	8	19	12
		25	6208	6226	8	18	11
		25	6208	6271	15	63	49
		4	6242	6255	4	13	10
38	4330011903579	104	6103	6194	10	91	82
		104	6103	6194	57	91	35
		104	6103	6194	5	91	87
		104	6103	6194	38	91	54
		104	6103	6194	23	91	69
		104	6103	6194	5	91	87
		104	6103	6194	65	91	27
		10	7056	7070	8	14	7
		10	7056	7070	8	14	7
		10	7056	7070	13	14	2
		10	7056	7070	5	14	10
		10	7056	7070	13	14	2
		10	7056	7070	13	14	2
		10	7056	7070	8	14	7
39	4710002000284	1	6121	6158	16	37	22
		1	6228	6241	9	13	5
		1	6263	6277	6	14	9
		5	6339	7008	26	34	9
40	4710006099779	0	N/A	N/A	N/A	N/A	N/A
		3	6326	6341	11	15	5
		2	6339	6353	11	14	4
41	4710007409477	0	N/A	N/A	N/A	N/A	N/A
		0	N/A	N/A	N/A	N/A	N/A
42	4710010053330	2	6135	6256	10	121	112
		15	6222	6249	7	27	21
		1	6305	6319	9	14	6
		5	6339	7029	7	55	49
43	4710011883516	5	6117	6134	7	17	11
		5	7029	7044	13	15	3
44	4710011888780	3	6326	6344	14	18	5
		3	6326	6344	9	18	10
		2	6339	6353	5	14	10
		2	6339	6353	5	14	10
45	4710013229315	0	N/A	N/A	N/A	N/A	N/A
46	4720001776157	5	6046	6058	5	12	8
47	4720002039658	0	N/A	N/A	N/A	N/A	N/A
48	4720004613796	1	6142	6162	9	20	12
		10	7007	7034	8	27	20
		4	7029	7051	7	22	16
49	4720007059542	17	7051	7069	9	18	10
50	4720009641433	3	6305	6406	9	101	93
		2	7051	7059	7	8	2
		2	7064	7085	9	21	13
51	4720009770316	1	6121	6152	24	31	8
		1	6169	6183	12	14	3
		1	6228	6256	10	28	19
		1	6291	6310	7	19	13
		4	6339	6354	6	15	10
52	4720010673891	2	6339	7087	5	113	109
		2	6339	7087	8	113	106
		2	6339	7087	7	113	107
		1	7051	7058	7	7	1
		1	7051	7058	6	7	2
		1	7051	7058	5	7	3
		1	7072	7085	6	13	8
		1	7072	7085	9	13	5
		1	7072	7085	5	13	9
53	4720010889650	3	6326	6341	7	15	9
		3	6326	6341	11	15	5
		2	6339	7003	23	29	7
		2	6339	7003	13	29	17
		2	7029	7044	12	15	4
		2	7029	7044	7	15	9
54	4720011233812	0	N/A	N/A	N/A	N/A	N/A
55	4720011560549	0	N/A	N/A	N/A	N/A	N/A
56	4720011797614	7	6339	6351	8	12	5
		7	6339	6351	3	12	10
		6	7072	7078	3	6	4

		6	7072	7075	2	3	2
57	4720011816796	3	6326	6341	11	15	5
		2	6339	6353	10	14	5
		5	7007	7023	6	16	11
58	4720011929602	5	7029	7044	14	15	2
59	4720012122604	2	7051	7065	8	14	7
		2	7051	7065	10	14	5
		2	7051	7065	10	14	5
		2	7051	7065	8	14	7
60	4720013252278	0	N/A	N/A	N/A	N/A	N/A
		0	N/A	N/A	N/A	N/A	N/A
61	4730001188546	6	6169	6185	5	16	12
		4	6264	6278	7	14	8
		2	7064	7086	7	22	16
62	4730002028469	3	6326	6341	8	15	8
		2	6339	6353	5	14	10
63	4730002660538	8	6169	6180	7	11	5
		9	6234	6250	7	16	10
		9	6291	6303	6	12	7
		17	6339	6354	5	15	11
64	4730003962962	3	6297	6311	11	14	4
65	4730004926040	1	6103	6162	8	59	52
		1	6103	6162	3	59	57
		1	6103	6162	9	59	51
		1	6103	6162	4	59	56
		8	6169	6180	6	11	6
		8	6169	6180	6	11	6
		8	6169	6180	6	11	6
		8	6169	6180	6	11	6
		1	6171	6185	12	14	3
		1	6171	6185	11	14	4
		1	6171	6185	13	14	2
		1	6171	6185	5	14	10
		1	6179	6197	13	18	6
		1	6179	6197	13	18	6
		1	6179	6197	7	18	12
		1	6179	6197	6	18	13
		6	6242	6255	4	13	10
		6	6242	6255	4	13	10
		6	6242	6255	6	13	8
		6	6242	6255	6	13	8
		14	6264	6276	6	12	7
		14	6264	6276	6	12	7
		14	6264	6276	7	12	6
		14	6264	6276	11	12	2
		1	6270	6285	7	15	9
		1	6270	6285	5	15	11
		1	6270	6285	13	15	3
		1	6270	6285	13	15	3
		16	6305	6319	7	14	8
		16	6305	6319	11	14	4
		16	6305	6319	4	14	11
		16	6305	6319	4	14	11
		1	6313	7007	17	59	43
		1	6313	7007	13	59	47
		1	6313	7007	13	59	47
		1	6313	7007	11	59	49
		7	7023	7037	11	14	4
		7	7023	7037	7	14	8
		7	7023	7037	7	14	8
		7	7023	7037	6	14	9
		1	7039	7055	6	16	11
		1	7039	7055	6	16	11
		1	7039	7055	11	16	6
		1	7039	7055	13	16	4
66	4730006416584	8	5341	5362	4	21	18
		2	6159	6173	4	14	11
		24	6169	6180	10	11	2
		9	6228	6241	9	13	5
		11	6305	6319	7	14	8
		25	7024	7038	4	14	11
67	4730006047953	5	6204	6226	20	22	3
		3	6228	6242	7	14	8
		8	6291	6310	11	19	9
		15	6339	6354	9	15	7
68	4730007205002	4	7029	7050	21	21	1
69	4730008137811	3	6326	6341	12	15	4
		2	6339	6351	11	12	2
70	4730010057253	0	N/A	N/A	N/A	N/A	N/A
71	4730010707680	0	N/A	N/A	N/A	N/A	N/A
72	4730010836059	3	6326	6340	14	14	1
		2	6339	6351	7	12	6
73	4730010900258	24	6264	6276	3	12	10
		15	6274	6295	11	21	11
		15	6291	6310	16	19	4
74	4730010996474	3	6326	6347	17	21	5

APPENDIX B - OST DATA

		2	6339	6354	9	15	7
		5	7029	7051	20	22	3
75	4730011173837	27	5308	5436	25	128	104
		14	6169	6190	18	21	4
		12	6228	6318	24	90	67
		12	6305	6313	6	8	3
		8	6339	7006	16	32	17
		40	6339	7006	29	32	4
		22	7064	7086	20	22	3
76	4730011196895	3	6326	6341	9	15	7
		3	6326	6341	11	15	5
		2	6339	6351	10	12	3
		2	6339	6351	8	12	5
		3	7064	7087	8	23	16
		3	7064	7087	7	23	17
77	4730011340854	12	6228	6241	7	13	7
		10	6339	6351	9	12	4
78	4730011549942	13	6253	6264	8	11	4
		6	6339	6351	8	12	5
		7	7029	7044	13	15	3
		15	7058	7078	15	20	6
79	4820011589223	5	6326	6341	5	15	11
		4	6339	6353	11	14	4
		7	7051	7063	10	12	3
80	4930004707354	3	6326	6339	3	13	11
		2	6339	6353	10	14	5
81	5305000213620	5	6305	6319	10	14	5
		13	7051	7065	1	14	14
82	5305000425567	17	6169	6185	9	16	8
		15	6228	6320	9	92	84
		21	6305	6318	11	13	3
		25	6339	6353	11	14	4
		2	7056	7069	12	13	2
		21	7072	7078	3	6	4
83	5305000593664	23	6326	6341	11	15	5
		15	6339	6353	10	14	5

APPENDIX B - INVENTORY SAVINGS

		COST OF INVENTORY					MONTHLY INCREMENTAL INVENTORY SAVINGS					
ITEM NO	NSN	GROUND RO	PREMIUM RO	DECREASE IN RO	U / P	T/P	INV	OBSOL	OTHER	STOR		INVENTORY HOLDING SAVINGS
1	2510007368622	2	2	0	3.36	0.00	0.00	0.00	0.00	0.00	=	0.00
2	2520011272624	6	5	1	17.41	17.41	0.15	0.02	0.13	0.01	=	0.31
3	2520011374843	2	2	0	3.73	0.00	0.00	0.00	0.00	0.00	=	0.00
4	2530003401405	0	0	0	0.42	0.00	0.00	0.00	0.00	0.00	=	0.00
5	2530011271677	0	0	0	117.92	0.00	0.00	0.00	0.00	0.00	=	0.00
6	2540010627132	41	39	2	1.95	3.90	0.03	0.00	0.03	0.00	=	0.07
7	2540011026863	2	1	1	13.53	13.53	0.11	0.02	0.10	0.01	=	0.24
8	2540011860969	185	167	18	207.92	3742.56	31.19	4.37	28.19	3.12	=	66 87
9	2590011689871	42	39	3	20.64	61.92	0.52	0.07	0.47	0.05	=	1.11
10	2590011905604	4	4	0	1199.67	0.00	0.00	0.00	0.00	0.00	=	0.00
11	2590012505009	1	1	0	18.41	0.00	0.00	0.00	0.00	0.00	=	0.00
12	2940005370946	130	123	7	1.60	11.20	0.09	0.01	0.08	0.01	=	0.20
13	3040010362989	0	0	0	18.32	0.00	0.00	0.00	0.00	0.00	=	0.00
14	3040012545288	12	12	0	253.91	0.00	0.00	0.00	0.00	0.00	=	0.00
15	3110001014194	34	32	2	42.72	85.44	0.71	0.10	0.64	0.07	=	1.53
16	3120011176328	6	6	0	11.98	0.00	0.00	0.00	0.00	0.00	=	0.00
17	3439001321331	9	8	1	6.70	6.70	0.06	0.01	0.05	0.01	=	0.12
18	3439002528352	22	20	2	2.73	5.46	0.05	0.01	0.04	0.00	=	0.10
19	3740006414719	0	0	0	136.90	0.00	0.00	0.00	0.00	0.00	=	0.00
20	3805011783177	0	0	0	82.48	0.00	0.00	0.00	0.00	0.00	=	0.00
21	3805013644471	0	0	0	142.20	0.00	0.00	0.00	0.00	0.00	=	0.00
22	3895002526896	0	0	0	862.48	0.00	0.00	0.00	0.00	0.00	=	0.00
23	4010001293221	19	17	2	8.83	17.66	0.15	0.02	0.13	0.01	=	0.32
24	4010005852108	4	4	0	13.01	0.00	0.00	0.00	0.00	0.00	=	0.00
25	4010011096832	4	4	0	4.50	0.00	0.00	0.00	0.00	0.00	=	0.00
26	4030000019952	6	5	1	5.94	5.94	0.05	0.01	0.04	0.00	=	0.11
27	4030009487315	2	2	0	0.16	0.00	0.00	0.00	0.00	0.00	=	0.00
28	4030010446040	0	0	0	7.84	0.00	0.00	0.00	0.00	0.00	=	0.00
29	4030011420456	3	3	0	0.48	0.00	0.00	0.00	0.00	0.00	=	0.00
30	4110009247845	8	8	0	0.83	0.00	0.00	0.00	0.00	0.00	=	0.00
31	4130001539266	0	0	0	220.23	0.00	0.00	0.00	0.00	0.00	=	0.00
32	4130001938488	4	4	0	28.63	0.00	0.00	0.00	0.00	0.00	=	0.00
33	4130009510806	5	5	0	8.45	0.00	0.00	0.00	0.00	0.00	=	0.00
34	4320009224933	31	30	1	21.70	21.70	0.18	0.03	0.16	0.02	=	0.39
35	4320010981703	2	2	0	11.36	0.00	0.00	0.00	0.00	0.00	=	0.00
36	4330011310279	12	11	1	5.19	5.19	0.04	0.01	0.04	0.00	=	0.09
37	4330011643433	15	14	1	20.34	20.34	0.17	0.02	0.15	0.02	=	0.36
38	4330011903579	69	58	11	7.38	81.18	0.68	0.09	0.61	0.07	=	1.45
39	4710002000284	4	4	0	0.85	0.00	0.00	0.00	0.00	0.00	=	0.00
40	4710006099779	0	0	0	22.66	0.00	0.00	0.00	0.00	0.00	=	0.00
41	4710007409477	0	0	0	10.92	0.00	0.00	0.00	0.00	0.00	=	0.00
42	4710010053330	8	8	0	35.78	0.00	0.00	0.00	0.00	0.00	=	0.00
43	4710011883516	1	1	0	8.92	0.00	0.00	0.00	0.00	0.00	=	0.00
44	4710011888780	4	4	0	5.49	0.00	0.00	0.00	0.00	0.00	=	0.00
45	4710013229315	0	0	0	35.19	0.00	0.00	0.00	0.00	0.00	=	0.00
46	4720001776157	0	0	0	6.69	0.00	0.00	0.00	0.00	0.00	=	0.00
47	4720002039658	0	0	0	10.14	0.00	0.00	0.00	0.00	0.00	=	0.00
48	4720004613796	4	4	0	364.52	0.00	0.00	0.00	0.00	0.00	=	0.00
49	4720007059542	0	0	0	289.91	0.00	0.00	0.00	0.00	0.00	=	0.00
50	4720009641433	5	5	0	26.20	0.00	0.00	0.00	0.00	0.00	=	0.00
51	4720009770316	3	3	0	4.96	0.00	0.00	0.00	0.00	0.00	=	0.00
52	4720010673891	5	5	0	116.70	0.00	0.00	0.00	0.00	0.00	=	0.00
53	4720010889650	4	4	0	7.84	0.00	0.00	0.00	0.00	0.00	=	0.00
54	4720011233812	0	0	0	6.93	0.00	0.00	0.00	0.00	0.00	=	0.00
55	4720011560549	0	0	0	1.40	0.00	0.00	0.00	0.00	0.00	=	0.00
56	4720011797614	6	6	0	26.13	0.00	0.00	0.00	0.00	0.00	=	0.00
57	4720011816796	4	4	0	19.45	0.00	0.00	0.00	0.00	0.00	=	0.00

APPENDIX B - INVENTORY SAVINGS

58	4720011929602	0	0	0	24.65	0.00	0.00	0.00	0.00	0.00	=	0.00
59	4720012122604	4	4	0	3.62	0.00	0.00	0.00	0.00	0.00	=	0.00
60	4720013252278	0	0	0	59.58	0.00	0.00	0.00	0.00	0.00	=	0.00
61	4730001188546	4	3	1	3.92	3.92	0.03	0.00	0.03	0.00	=	0.07
62	4730002028469	0	0	0	3.16	0.00	0.00	0.00	0.00	0.00	=	0.00
63	4730002660538	10	9	1	0.34	0.34	0.00	0.00	0.00	0.00	=	0.01
64	4730003962962	0	0	0	4.76	0.00	0.00	0.00	0.00	0.00	=	0.00
65	4730004926040	51	48	3	2.37	7.11	0.06	0.01	0.05	0.01	=	0.13
66	4730005416584	14	13	1	0.18	0.18	0.00	0.00	0.00	0.00	=	0.00
67	4730006047953	9	9	0	0.53	0.00	0.00	0.00	0.00	0.00	=	0.00
68	4730007205002	0	0	0	6.71	0.00	0.00	0.00	0.00	0.00	=	0.00
69	4730008137811	0	0	0	2.71	0.00	0.00	0.00	0.00	0.00	=	0.00
70	4730010057253	0	0	0	0.22	0.00	0.00	0.00	0.00	0.00	=	0.00
71	4730010707680	0	0	0	2.02	0.00	0.00	0.00	0.00	0.00	=	0.00
72	4730010836059	0	0	0	11.68	0.00	0.00	0.00	0.00	0.00	=	0.00
73	4730010900258	17	16	1	0.46	0.46	0.00	0.00	0.00	0.00	=	0.01
74	4730010996474	4	4	0	4.00	0.00	0.00	0.00	0.00	0.00	=	0.00
75	4730011173837	24	21	3	0.76	2.28	0.02	0.00	0.02	0.00	=	0.04
76	4730011196895	4	4	0	3.36	0.00	0.00	0.00	0.00	0.00	=	0.00
77	4730011340854	6	6	0	1.06	0.00	0.00	0.00	0.00	0.00	=	0.00
78	4730011549942	11	10	1	9.46	9.46	0.08	0.01	0.07	0.01	=	0.17
79	4820011589223	3	3	0	16.52	0.00	0.00	0.00	0.00	0.00	=	0.00
80	4930004707354	0	0	0	91.35	0.00	0.00	0.00	0.00	0.00	=	0.00
81	5305000213620	6	6	0	0.09	0.00	0.00	0.00	0.00	0.00	=	0.00
82	5305000425567	22	21	1	0.19	0.19	0.00	0.00	0.00	0.00	=	0.00
83	5305000593664	9	8	1	14.88	14.88	0.12	0.02	0.11	0.01	=	0.27
												73.95

APPENDIX B - TRANSPORTATION COSTS

MONTHLY TRANSPORTATION REQUIREMENT **MONTHLY INCREMENTAL TRANSPORTATION COST**

ITEM NO	NSN	UNIT WEIGHT (LBS)	AMRD	PREMIUM RATE	PREMIUM COST		GROUND RATE	GROUND COST		TRANSPORTATION COST
1	2510007368622	0.08	0	3.50	7.00	-	0.23	0.46	=	6.54
2	2520011272624	0.20	1	3.50	7.00	-	0.23	0.46	=	6.54
3	2520011374843	1.37	0	3.50	7.00	-	0.23	0.46	=	6.54
4	2530003401405	0.02	0	0.00	0.00	-	0.00	0.00	=	0.00
5	2530011271677	0.01	0	0.00	0.00	-	0.00	0.00	=	0.00
6	2540010627132	0.01	12	3.50	7.00	-	0.23	0.46	=	6.54
7	2540011026863	0.20	0	3.50	7.00	-	0.23	0.46	=	6.54
8	2540011860969	3.00	56	59.67	119.34	-	19.09	38.18	=	81.16
9	2590011689871	0.06	12	3.50	7.00	-	0.23	0.46	=	6.54
10	2590011905604	4.50	1	3.57	7.14	-	0.46	0.92	=	6.22
11	2590012505009	0.02	0	3.50	7.00	-	0.23	0.46	=	6.54
12	2940005370946	0.10	41	3.57	7.14	-	0.46	0.92	=	6.22
13	3040010362989	0.00	0	0.00	0.00	-	0.00	0.00	=	0.00
14	3040012545288	0.00	3	3.50	7.00	-	0.23	0.46	=	6.54
15	3110001014194	8.00	9	26.67	53.34	-	8.28	16.56	=	36.78
16	3120011176328	0.06	2	3.50	7.00	-	0.23	0.46	=	6.54
17	3439001321331	0.55	2	3.50	7.00	-	0.23	0.46	=	6.54
18	3439002528352	1.01	7	3.62	7.24	-	0.69	1.38	=	5.86
19	3740006414719	11.00	0	0.00	0.00	-	0.00	0.00	=	0.00
20	3805011783177	100.00	0	0.00	0.00	-	0.00	0.00	=	0.00
21	3805013644471	2.40	0	0.00	0.00	-	0.00	0.00	=	0.00
22	3895002526896	45.00	0	0.00	0.00	-	0.00	0.00	=	0.00
23	4010001293221	5.68	4	9.12	18.24	-	2.76	5.52	=	12.72
24	4010005852108	0.10	1	3.50	7.00	-	0.23	0.46	=	6.54
25	4010011096832	1.75	1	3.50	7.00	-	0.23	0.46	=	6.54
26	4030000019952	0.22	1	3.50	7.00	-	0.23	0.46	=	6.54
27	4030009487315	0.01	1	3.50	7.00	-	0.23	0.46	=	6.54
28	4030010446040	0.10	0	0.00	0.00	-	0.00	0.00	=	0.00
29	4030011420456	0.10	1	3.50	7.00	-	0.23	0.46	=	6.54
30	4110009247845	0.05	1	3.50	7.00	-	0.23	0.46	=	6.54
31	4130001539266	0.03	0	0.00	0.00	-	0.00	0.00	=	0.00
32	4130001938488	0.20	1	3.50	7.00	-	0.23	0.46	=	6.54
33	4130009510806	2.00	1	3.50	7.00	-	0.23	0.46	=	6.54
34	4320009224933	0.25	5	3.50	7.00	-	0.23	0.46	=	6.54
35	4320010981703	0.13	0	3.50	7.00	-	0.23	0.46	=	6.54
36	4330011310279	1.00	3	3.50	7.00	-	0.23	0.46	=	6.54
37	4330011643433	2.40	4	3.67	7.34	-	0.92	1.84	=	5.50
38	4330011903579	0.43	16	3.62	7.24	-	0.69	1.38	=	5.86
39	4710002000284	1.00	1	3.50	7.00	-	0.23	0.46	=	6.54
40	4710006099779	0.50	0	0.00	0.00	-	0.00	0.00	=	0.00
41	4710007409477	1.49	0	0.00	0.00	-	0.00	0.00	=	0.00
42	4710010053330	0.50	2	3.50	7.00	-	0.23	0.46	=	6.54
43	4710011883516	0.24	0	3.50	7.00	-	0.23	0.46	=	6.54
44	4710011888780	1.49	1	3.50	7.00	-	0.23	0.46	=	6.54
45	4710013229315	8.76	0	0.00	0.00	-	0.00	0.00	=	0.00
46	4720001776157	1.02	0	0.00	0.00	-	0.00	0.00	=	0.00
47	4720002039658	0.25	0	0.00	0.00	-	0.00	0.00	=	0.00
48	4720004613796	54.00	1	19.92	39.84	-	6.21	12.42	=	27.42
49	4720007059542	1.00	0	0.00	0.00	-	0.00	0.00	=	0.00
50	4720009641433	31.00	1	10.92	21.84	-	3.45	6.90	=	14.94
51	4720009770316	0.26	1	3.50	7.00	-	0.23	0.46	=	6.54

52	4720010673891	0.00	1	3.50	7.00	-	0.23	0.46	=	6.54
53	4720010889650	0.12	1	3.50	7.00	-	0.23	0.46	=	6.54
54	4720011233812	0.63	0	0.00	0.00	-	0.00	0.00	=	0.00
55	4720011560549	0.10	0	0.00	0.00	-	0.00	0.00	=	0.00
56	4720011797614	0.05	2	3.50	7.00	-	0.23	0.46	=	6.54
57	4720011816796	0.50	1	3.50	7.00	-	0.23	0.46	=	6.54
58	4720011929602	0.00	0	0.00	0.00	-	0.00	0.00	=	0.00
59	4720012122604	0.10	1	3.50	7.00	-	0.23	0.46	=	6.54
60	4720013252278	0.01	0	0.00	0.00	-	0.00	0.00	=	0.00
61	4730001188546	1.00	1	3.50	7.00	-	0.23	0.46	=	6.54
62	4730002028469	0.30	0	0.00	0.00	-	0.00	0.00	=	0.00
63	4730002660538	0.08	3	3.50	7.00	-	0.23	0.46	=	6.54
64	4730003962962	0.01	0	0.00	0.00	-	0.00	0.00	=	0.00
65	4730004926040	0.13	16	3.50	7.00	-	0.23	0.46	=	6.54
66	4730005416584	0.10	5	3.50	7.00	-	0.23	0.46	=	6.54
67	4730006047953	0.10	2	3.50	7.00	-	0.23	0.46	=	6.54
68	4730007205002	0.54	0	0.00	0.00	-	0.00	0.00	=	0.00
69	4730008137811	0.01	0	0.00	0.00	-	0.00	0.00	=	0.00
70	4730010057253	0.01	0	0.00	0.00	-	0.00	0.00	=	0.00
71	4730010707680	0.10	0	0.00	0.00	-	0.00	0.00	=	0.00
72	4730010836059	0.00	0	0.00	0.00	-	0.00	0.00	=	0.00
73	4730010900258	0.01	5	3.50	7.00	-	0.23	0.46	=	6.54
74	4730010996474	0.15	1	3.50	7.00	-	0.23	0.46	=	6.54
75	4730011173837	0.06	5	3.50	7.00	-	0.23	0.46	=	6.54
76	4730011196895	0.30	1	3.50	7.00	-	0.23	0.46	=	6.54
77	4730011340854	0.01	2	3.50	7.00	-	0.23	0.46	=	6.54
78	4730011549942	0.50	3	3.50	7.00	-	0.23	0.46	=	6.54
79	4820011589223	0.00	1	3.50	7.00	-	0.23	0.46	=	6.54
80	4930004707354	0.01	0	0.00	0.00	-	0.00	0.00	=	0.00
81	5305000213620	0.03	2	3.50	7.00	-	0.23	0.46	=	6.54
82	5305000425567	0.01	6	3.50	7.00	-	0.23	0.46	=	6.54
83	5305000593664	0.01	3	3.50	7.00	-	0.23	0.46	=	6.54
										503.52

APPENDIX B - CONSUMABLE TRADEOFF

MONTHLY INCREMENTAL INVENTORY / TRANSPORTATION TRADEOFF

ITEM NO	NSN	MONTHLY INVENTORY HOLDING COST		MONTHLY TRANSPORTATION COST		MONTHLY INV-TRAN TRADEOFF
1	2510007368622	0.00	-	6.54	=	(6.54)
2	2520011272624	0.31	-	6.54	=	(6.23)
3	2520011374843	0.00	-	6.54	=	(6.54)
4	2530003401405	0.00	-	0.00	=	0.00
5	2530011271677	0.00	-	0.00	=	0.00
6	2540010627132	0.07	-	6.54	=	(6.47)
7	2540011026863	0.24	-	6.54	=	(6.30)
8	2540011860969	66.87	-	81.16	=	(14.29)
9	2590011689871	1.11	-	6.54	=	(5.43)
10	2590011905604	0.00	-	6.22	=	(6.22)
11	2590012505009	0.00	-	6.54	=	(6.54)
12	2940005370946	0.20	-	6.22	=	(6.02)
13	3040010362989	0.00	-	0.00	=	0.00
14	3040012545288	0.00	-	6.54	=	(6.54)
15	3110001014194	1.53	-	36.78	=	(35.25)
16	3120011176328	0.00	-	6.54	=	(6.54)
17	3439001321331	0.12	-	6.54	=	(6.42)
18	3439002528352	0.10	-	5.86	=	(5.76)
19	3740006414719	0.00	-	0.00	=	0.00
20	3805011783177	0.00	-	0.00	=	0.00
21	3805013644471	0.00	-	0.00	=	0.00
22	3895002526896	0.00	-	0.00	=	0.00
23	4010001293221	0.32	-	12.72	=	(12.40)
24	4010005852108	0.00	-	6.54	=	(6.54)
25	4010011096832	0.00	-	6.54	=	(6.54)
26	4030000019952	0.11	-	6.54	=	(6.43)
27	4030009487315	0.00	-	6.54	=	(6.54)
28	4030010446040	0.00	-	0.00	=	0.00
29	4030011420456	0.00	-	6.54	=	(6.54)
30	4110009247845	0.00	-	6.54	=	(6.54)
31	4130001539266	0.00	-	0.00	=	0.00
32	4130001938488	0.00	-	6.54	=	(6.54)
33	4130009510806	0.00	-	6.54	=	(6.54)
34	4320009224933	0.39	-	6.54	=	(6.15)
35	4320010981703	0.00	-	6.54	=	(6.54)
36	4330011310279	0.09	-	6.54	=	(6.45)
37	4330011643433	0.36	-	5.50	=	(5.14)
38	4330011903579	1.45	-	5.86	=	(4.41)
39	4710002000284	0.00	-	6.54	=	(6.54)
40	4710006099779	0.00	-	0.00	=	0.00
41	4710007409477	0.00	-	0.00	=	0.00
42	4710010053330	0.00	-	6.54	=	(6.54)
43	4710011883516	0.00	-	6.54	=	(6.54)
44	4710011888780	0.00	-	6.54	=	(6.54)
45	4710013229315	0.00	-	0.00	=	0.00
46	4720001776157	0.00	-	0.00	=	0.00
47	4720002039658	0.00	-	0.00	=	0.00
48	4720004613796	0.00	-	27.42	=	(27.42)
49	4720007059542	0.00	-	0.00	=	0.00
50	4720009641433	0.00	-	14.94	=	(14.94)
51	4720009770316	0.00	-	6.54	=	(6.54)

52	4720010673891	0.00	-	6.54	=	(6.54)
53	4720010889650	0.00	-	6.54	=	(6.54)
54	4720011233812	0.00	-	0.00	=	0.00
55	4720011560549	0.00	-	0.00	=	0.00
56	4720011797614	0.00	-	6.54	=	(6.54)
57	4720011816796	0.00	-	6.54	=	(6.54)
58	4720011929602	0.00	-	0.00	=	0.00
59	4720012122604	0.00	-	6.54	=	(6.54)
60	4720013252278	0.00	-	0.00	=	0.00
61	4730001188546	0.07	-	6.54	=	(6.47)
62	4730002028469	0.00	-	0.00	=	0.00
63	4730002660538	0.01	-	6.54	=	(6.53)
64	4730003962962	0.00	-	0.00	=	0.00
65	4730004926040	0.13	-	6.54	=	(6.41)
66	4730005416584	0.00	-	6.54	=	(6.54)
67	4730006047953	0.00	-	6.54	=	(6.54)
68	4730007205002	0.00	-	0.00	=	0.00
69	4730008137811	0.00	-	0.00	=	0.00
70	4730010057253	0.00	-	0.00	=	0.00
71	4730010707680	0.00	-	0.00	=	0.00
72	4730010836059	0.00	-	0.00	=	0.00
73	4730010900258	0.01	-	6.54	=	(6.53)
74	4730010996474	0.00	-	6.54	=	(6.54)
75	4730011173837	0.04	-	6.54	=	(6.50)
76	4730011196895	0.00	-	6.54	=	(6.54)
77	4730011340854	0.00	-	6.54	=	(6.54)
78	4730011549942	0.17	-	6.54	=	(6.37)
79	4820011589223	0.00	-	6.54	=	(6.54)
80	4930004707354	0.00	-	0.00	=	0.00
81	5305000213620	0.00	-	6.54	=	(6.54)
82	5305000425567	0.00	-	6.54	=	(6.54)
83	5305000593664	0.27	-	6.54	=	(6.27)
		73.95	-	503.52	=	(429.57)

APPENDIX C - CONSUMABLE DESCRIPTIONS

ITEM NO	NSN	NOMENCLATURE	CEC	SOS	SD	CITY	STATE	PRICE ($)	WEIGHT (LBS)	CUBE (FT)	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)
1	2510007368622	BRACKET AS	4	S9C	SAC	MECHANICSBURG	PA	3 36	0.0800	0.0060	0	0	0
2	2520011272624	SHAFT,SPEE	5	S9C	SAC	MECHANICSBURG	PA	17 41	0.2000	0.0350	0	0	0
3	2520011374843	SHIELD AND	5	S9C	SAC	MECHANICSBURG	PA	3 73	1.3700	0 0080	0	0	0
4	2530003401405	BLEEDER VA	5	S9C	SAC	MECHANICSBURG	PA	0 42	0 0200	0.0010	0	0	0
5	2530011271677	VALVE,BRAK	5	S9C	SAC	MECHANICSBURG	PA	117 92	0 0100	0.0001	0	0	0
6	2540010627132	DRIVE ADAP	5	S9C	SAC	MECHANICSBURG	PA	1 95	0.0100	0 0012	2	1	1
7	2540011026863	COVER,HALF	5	S9C	SNC	NEW CUMBERLAND	PA	13.53	0 2000	0 0104	3	3	2
8	2540011860969	MOTOR,WIND	3	S9C	SAC	MECHANICSBURG	PA	207 92	3.0000	0 1090	0	0	0
9	2590011689871	CONTROL AS	5	S9C	SAC	MECHANICSBURG	PA	20 64	0.0600	0 2639	19	12	2
10	2590011905604	ANNUNCIATO	5	S9C	SAC	MECHANICSBURG	PA	1199.67	4 5000	0 0960	0	0	0
11	2590012505009	ROD,RETAIN	2	S9C	SAC	MECHANICSBURG	PA	18 41	0 0200	0 0050	0	0	0
12	2940005370946	FILTER ELE	2	S9C	SAC	MECHANICSBURG	PA	1.6	0 1000	0 0060	0	0	0
13	3040010362989	CONNECTING	5	S9C	SAC	MECHANICSBURG	PA	18 32	0 0000	0 0000	0	0	0
14	3040012545288	SHAFT,SHOU	5	S9C	SAC	MECHANICSBURG	PA	253.91	0.0000	0.0000	0	0	0
15	3110001014194	BEARING,RO	5	S9I	SAI	MECHANICSBURG	PA	42.72	8.0000	0 0660	0	0	0
16	3120011176328	BUSHING,SL	5	S9I	SAI	MECHANICSBURG	PA	11 98	0 0600	0 0020	0	0	0
17	3439001321331	DESOLDERIN	2	S9G	SAI	MECHANICSBURG	PA	6.7	0.5500	0.0080	0	0	0
18	3439002528352	ROD,WELDIN	2	S9G	SAI	MECHANICSBURG	PA	2 73	1.0100	0.0000	0	0	0
19	3740006414719	SPRAYER,PE	1	S9G	SAG	MECHANICSBURG	PA	136 9	11.0000	1.3889	24	10	10
20	3805011783177	CUTTING ED	5	S9I	SAC	MECHANICSBURG	PA	82.48	100.0000	1 2280	0	0	0
21	3805013644471	PARTS KIT,	5	S9I	SAI	MECHANICSBURG	PA	142 2	2 4000	0.3240	0	0	0
22	3895002526896	REELING MA	1	S9I	SAI	MECHANICSBURG	PA	862 48	45.0000	24 4444	33	32	40
23	4010001293221	CHAIN,WELD	5	S9G	SAI	MECHANICSBURG	PA	8 83	5.6800	0 1250	0	0	0
24	4010005852108	CHAIN,WELD	5	S9G	SAI	MECHANICSBURG	PA	13 01	0 1000	0.0023	2	2	1
25	4010011096832	WIRE ROPE	5	S9G	SAG	MECHANICSBURG	PA	4 5	1.7500	0.2000	0	0	0
26	4030000019952	PLUG,WIRE	5	S9G	SAG	MECHANICSBURG	PA	5.94	0.2200	0.0012	2	1	1
27	4030009487315	HOOK,CHAIN	5	S9G	SNG	NEW CUMBERLAND	PA	0 16	0 0100	0.0010	0	0	0
28	4030010446040	SHACKLE	5	S9G	SAI	MECHANICSBURG	PA	7 84	0.1000	0.0070	0	0	0
29	4030011420456	SWAGING SL	2	S9G	SAI	MECHANICSBURG	PA	0 48	0 1000	0.0010	0	0	0
30	4110009247845	TRAY,ICE C	5	S9I	SAI	MECHANICSBURG	PA	0.83	0.0500	0.0060	0	0	0
31	4130001539266	PANEL,CONT	5	S9I	SAI	MECHANICSBURG	PA	220.23	0.0300	0.0000	0	0	0
32	4130001938488	FILTER ELE	5	S9I	SAI	MECHANICSBURG	PA	28 63	0 2000	0.0250	0	0	0
33	4130009510806	FILTER ELE	5	S9I	SAG	MECHANICSBURG	PA	8 45	2.0000	0 0110	0	0	0
34	4320009224933	COVER ASSE	5	S9C	SAC	MECHANICSBURG	PA	21.7	0.2500	0.0140	0	0	0
35	4320010981703	PARTS KIT,	5	S9C	SAC	MECHANICSBURG	PA	11.36	0 1300	0.0140	0	0	0
36	4330011310279	PARTS KIT,	5	S9C	SAC	MECHANICSBURG	PA	5.19	1.0000	0.0700	0	0	0
37	4330011643433	FILTER ELE	5	S9C	SAC	MECHANICSBURG	PA	20 34	2.4000	0 1300	0	0	0
38	4330011903579	FILTER ELE	3	S9C	SAC	MECHANICSBURG	PA	7.38	0.4300	0 0093	4	2	2
39	4710002000284	TUBE,METAL	5	S9C	SAC	MECHANICSBURG	PA	0 85	1 0000	0.0060	0	0	0
40	4710006099779	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	22 66	0.5000	0.2810	0	0	0
41	4710007409477	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	10 92	1 4900	0.7494	37	7	5
42	4710010053330	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	35 78	0.5000	0.0000	0	0	0
43	4710011883516	TUBE,BENT,	5	S9C	SAC	MECHANICSBURG	PA	8 92	0 2400	0.1597	0	0	0
44	4710011888780	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	5 49	1 4900	0.5494	0	0	0
45	4710013229315	TUBE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	35.19	8.7600	1.3704	37	8	8
46	4720001776157	HOSE,PREFO	5	S9C	SAC	MECHANICSBURG	PA	6.69	1.0200	0.1111	12	4	4
47	4720002039658	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	10.14	0.2500	0.0100	0	0	0
48	4720004613796	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	364.52	54 0000	2.5000	0	0	0
49	4720007059542	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	289 91	1.0000	0.0080	0	0	0
50	4720009641433	TUBING,NON	5	S9C	SAC	MECHANICSBURG	PA	26.2	31.0000	3.0000	0	0	0
51	4720009770316	HOSE,PREFO	5	S9C	SAC	MECHANICSBURG	PA	4.96	0.2600	0.0260	0	0	0
52	4720010673891	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	116.7	0.0000	0.0000	0	0	0
53	4720010889650	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	7.84	0.1200	0.1250	0	0	0
54	4720011233812	HOSE,NONME	5	S9C	SAC	MECHANICSBURG	PA	6 93	0.6300	0.0140	0	0	0
55	4720011560549	HOSE,NONME	2	S9C	SAC	MECHANICSBURG	PA	1.4	0.1000	0 0030	0	0	0
56	4720011797614	HOSE ASSEM	2	S9C	SAC	MECHANICSBURG	PA	26 13	0.0500	0.0180	0	0	0
57	4720011816796	HOSE,PREFO	5	S9C	SAC	MECHANICSBURG	PA	19 45	0.5000	0 0310	0	0	0
58	4720011929602	HOSE ASSEM	5	S9C	SAC	MECHANICSBURG	PA	24 65	0 0000	0 0000	0	0	0
59	4720012122604	HOSE,NONME	5	S9C	SAC	MECHANICSBURG	PA	3 62	0.1000	0.0580	0	0	0
60	4720013252278	HOSE,NONME	5	S9C	SAC	MECHANICSBURG	PA	59 58	0.0100	0.0000	0	0	0
61	4730001188546	ELBOW,TUBE	5	S9C	SAC	MECHANICSBURG	PA	3 92	1.0000	0 0020	0	0	0
62	4730002028469	ADAPTER,ST	4	S9C	SAC	MECHANICSBURG	PA	3 16	0.3000	0 0220	0	0	0
63	4730002660538	ADAPTER,ST	4	S9C	SAC	MECHANICSBURG	PA	0.34	0.0800	0.0100	0	0	0
64	4730003962962	CONNECTOR,	5	S9C	SNC	NEW CUMBERLAND	PA	4 76	0.0100	0.0010	0	0	0
65	4730004926040	ADAPTER,ST	3	S9C	SAC	MECHANICSBURG	PA	2.37	0 1300	0 0012	2	1	1
66	4730005416584	CLAMP,HOSE	4	S9C	SAC	MECHANICSBURG	PA	0.18	0.1000	0.0010	0	0	0
67	4730006047953	PLUG,PIPE	5	S9C	SAC	MECHANICSBURG	PA	0.53	0.1000	0.0090	0	0	0
68	4730007205002	REDUCER,PI	2	S9C	SAC	MECHANICSBURG	PA	6.71	0.5400	0 0020	0	0	0
69	4730008137811	TEE,PIPE T	5	S9C	SAC	MECHANICSBURG	PA	2 71	0 0100	0.0010	0	0	0
70	4730010057253	CLAMP,HOSE	5	S9C	SAC	MECHANICSBURG	PA	0 22	0 0100	0.0010	0	0	0
71	4730010707680	ELBOW,PIPE	5	S9C	SAC	MECHANICSBURG	PA	2.02	0.1000	0.0010	0	0	0
72	4730010836059	CLAMP,HOSE	5	S9C	SAC	MECHANICSBURG	PA	11 68	0 0000	0 0000	0	0	0
73	4730010900258	CLAMP,HOSE	5	S9C	SAC	MECHANICSBURG	PA	0 46	0 0100	0.0010	0	0	0
74	4730010996474	PLUG,TUBE	5	S9C	SAC	MECHANICSBURG	PA	4	0.1500	0 0104	3	3	2
75	4730011173837	CLAMP,HOSE	5	S9C	SNC	NEW CUMBERLAND	PA	0.76	0 0600	0.0090	0	0	0
76	4730011196895	TEE,PIPE T	5	S9C	SAC	MECHANICSBURG	PA	3.36	0.3000	0 0020	0	0	0
77	4730011340854	ADAPTER,ST	5	S9C	SAC	MECHANICSBURG	PA	1.06	0 0100	0.0010	0	0	0
78	4730011549942	PLUG,PIPE	5	S9C	SAC	MECHANICSBURG	PA	9 46	0.5000	0.0050	0	0	0
79	4820011589223	COCK,DRAIN	4	S9C	SAC	MECHANICSBURG	PA	16.52	0 0000	0.0000	0	0	0
80	4930004707354	SLEEVE ASS	5	S9C	SAC	MECHANICSBURG	PA	91.35	0.0100	0.0010	0	0	0
81	5305000213620	SCREW,CAP,	2	S9I	SAI	MECHANICSBURG	PA	0 09	0.0300	0.0010	0	0	0
82	5305000425567	SCREW,ASSE	5	S9I	SAI	MECHANICSBURG	PA	0.19	0.0100	0 0010	0	0	0
83	5305000593664	SCREW,MACH	3	S9I	SAI	MECHANICSBURG	PA	14.88	0.0100	0.0010	0	0	0

APPENDIX C - CONSUMABLE RO EQUATION

Ground Simulation

RO = [(OST + SL + OL) / 30] X AMRD

ITEM NO	NSN	OST	SL	OL	AMRD	RO
1	2510007368622	24	15	60	0	2
2	2520011272624	13	30	60	1	6
3	2520011374843	13	30	60	0	2
4	2530003401405	5	30	60	0	0
5	2530011271677	5	30	60	0	0
6	2540010627132	12	30	60	12	40
7	2540011026863	21	30	60	0	2
8	2540011860969	25	15	60	54	181
9	2590011689871	17	30	60	11	41
10	2590011905604	18	30	60	1	4
11	2590012505009	21	15	60	0	1
12	2940005370946	21	15	60	41	130
13	3040010362989	16	30	60	0	0
14	3040012545288	12	30	60	3	12
15	3110001014194	20	30	60	9	34
16	3120011176328	18	30	60	2	6
17	3439001321331	23	15	60	2	8
18	3439002528352	14	15	60	7	22
19	3740006414719	5	15	60	0	0
20	3805011783177	22	30	60	0	0
21	3805013644471	5	30	60	0	0
22	3895002526896	5	15	60	0	0
23	4010001293221	35	30	60	4	18
24	4010005852108	14	30	60	1	4
25	4010011096832	21	30	60	1	4
26	4030000019952	23	30	60	1	5
27	4030009487315	21	30	60	1	3
28	4030010446040	23	30	60	0	0
29	4030011420456	13	15	60	1	3
30	4110009247845	163	30	60	1	8
31	4130001539266	15	30	60	0	0
32	4130001938488	16	30	60	1	4
33	4130009510806	34	30	60	1	5
34	4320009224933	102	30	60	5	30
35	4320010981703	14	30	60	0	2
36	4330011310279	22	30	60	3	12
37	4330011643433	25	30	60	4	15
38	4330011903579	55	15	60	15	66
39	4710002000284	24	30	60	1	4
40	4710006099779	12	30	60	0	0
41	4710007409477	5	30	60	0	0
42	4710010053330	57	30	60	2	9
43	4710011883516	16	30	60	0	1
44	4710011888780	16	30	60	1	4
45	4710013229315	5	30	60	0	0
46	4720001776157	12	30	60	0	0
47	4720002039658	5	30	60	0	0
48	4720004613796	23	30	60	1	4
49	4720007059542	18	30	60	0	0
50	4720009641433	42	30	60	1	5
51	4720009770316	21	30	60	1	3
52	4720010673891	42	30	60	1	5

APPENDIX C - CONSUMABLE RO EQUATION

53	4720010889650	20	30	60	1	4
54	4720011233812	5	30	60	0	0
55	4720011560549	5	15	60	0	0
56	4720011797614	8	15	60	2	6
57	4720011816796	15	30	60	1	4
58	4720011929602	15	30	60	0	0
59	4720012122604	14	30	60	1	4
60	4720013252278	5	30	60	0	0
61	4730001188546	18	30	60	1	4
62	4730002028469	15	15	60	0	0
63	4730002660538	13	15	60	3	10
64	4730003962962	14	30	60	0	0
65	4730004926040	21	15	60	16	52
66	4730005416584	14	15	60	5	14
67	4730006047953	18	30	60	3	10
68	4730007205002	21	15	60	0	0
69	4730008137811	15	30	60	0	0
70	4730010057253	5	30	60	0	0
71	4730010707680	5	30	60	0	0
72	4730010836059	13	30	60	0	0
73	4730010900258	17	30	60	5	17
74	4730010996474	19	30	60	1	4
75	4730011173837	48	30	60	5	24
76	4730011196895	17	30	60	1	4
77	4730011340854	12	30	60	2	6
78	4730011549942	15	30	60	3	11
79	4820011589223	14	15	60	1	3
80	4930004707354	13	30	60	0	0
81	5305000213620	14	15	60	2	6
82	5305000425567	26	30	60	6	22
83	5305000593664	14	15	60	3	9

RO = Requisitioning Objective
RR = Repair Rate
RCT = Repair Cycle Time
OST=Order Ship Time
SL=Safety Level
OL=Operating Level
AMRD=Average Monthtly Recurring

APPENDIX C - CONSUMABLE RO EQUATION

Premium Simulation

RO = [(OST + SL + OL) / 30] X AMRD

ITEM NO	NSN	OST	SL	OL	AMRD	RO
1	2510007368622	14	15	60	0	2
2	2520011272624	7	30	60	1	5
3	2520011374843	9	30	60	0	2
4	2530003401405	5	30	60	0	0
5	2530011271677	5	30	60	0	0
6	2540010627132	8	30	60	12	39
7	2540011026863	9	30	60	0	2
8	2540011860969	15	15	60	54	162
9	2590011689871	10	30	60	11	38
10	2590011905604	13	30	60	1	4
11	2590012505009	16	15	60	0	1
12	2940005370946	16	15	60	41	123
13	3040010362989	16	30	60	0	0
14	3040012545288	12	30	60	3	12
15	3110001014194	14	30	60	9	32
16	3120011176328	10	30	60	2	6
17	3439001321331	14	15	60	2	7
18	3439002528352	5	15	60	7	20
19	3740006414719	5	15	60	0	0
20	3805011783177	7	30	60	0	0
21	3805013644471	5	30	60	0	0
22	3895002526896	5	15	60	0	0
23	4010001293221	30	30	60	4	17
24	4010005852108	6	30	60	1	4
25	4010011096832	17	30	60	1	4
26	4030000019952	15	30	60	1	5
27	4030009487315	15	30	60	1	3
28	4030010446040	4	30	60	0	0
29	4030011420456	7	15	60	1	3
30	4110009247845	157	30	60	1	8
31	4130001539266	5	30	60	0	0
32	4130001938488	7	30	60	1	4
33	4130009510806	24	30	60	1	5
34	4320009224933	94	30	60	5	29
35	4320010981703	14	30	60	0	2
36	4330011310279	14	30	60	3	11
37	4330011643433	16	30	60	4	14
38	4330011903579	33	15	60	15	55
39	4710002000284	11	30	60	1	3
40	4710006099779	5	30	60	0	0
41	4710007409477	5	30	60	0	0
42	4710010053330	46	30	60	2	8
43	4710011883516	7	30	60	0	1
44	4710011888780	9	30	60	1	4
45	4710013229315	5	30	60	0	0
46	4720001776157	8	30	60	0	0
47	4720002039658	5	30	60	0	0
48	4720004613796	16	30	60	1	4
49	4720007059542	10	30	60	0	0
50	4720009641433	33	30	60	1	5
51	4720009770316	11	30	60	1	3
52	4720010673891	40	30	60	1	5

53	4720010889650	8	30	60	1	4
54	4720011233812	5	30	60	0	0
55	4720011560549	5	15	60	0	0
56	4720011797614	5	15	60	2	6
57	4720011816796	7	30	60	1	4
58	4720011929602	2	30	60	0	0
59	4720012122604	6	30	60	1	4
60	4720013252278	6	30	60	0	0
61	4730001188546	12	30	60	1	3
62	4730002028469	9	15	60	0	0
63	4730002660538	8	15	60	3	9
64	4730003962962	4	30	60	0	0
65	4730004926040	14	15	60	16	48
66	4730005416584	9	15	60	5	13
67	4730006047953	7	30	60	3	9
68	4730007205002	1	15	60	0	0
69	4730008137811	3	30	60	0	0
70	4730010057253	5	30	60	0	0
71	4730010707680	5	30	60	0	0
72	4730010836059	4	30	60	0	0
73	4730010900258	8	30	60	5	16
74	4730010996474	5	30	60	1	4
75	4730011173837	27	30	60	5	20
76	4730011196895	9	30	60	1	4
77	4730011340854	6	30	60	2	6
78	4730011549942	4	30	60	3	10
79	4820011589223	6	15	60	1	3
80	4930004707354	8	30	60	0	0
81	5305000213620	10	15	60	2	6
82	5305000425567	18	30	60	6	20
83	5305000593664	5	15	60	3	8

RO = Requisitioning Objective
RR = Repair Rate
RCT = Repair Cycle Time
OST=Order Ship Time
SL=Safety Level
OL=Operating Level
AMRD=Average Monthtly Recurring

APPENDIX C - AMRD DATA

ITEM NO	MONTHTLY DEMAND FOR EACH NSN	APR 96	MAY 96	JUN 96	JUL 96	AUG 96	SEP 96	OCT 96	NOV 96	DEC 96	JAN 97	FEB 97	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	2510007368622	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2520011272624	0	0	14	0	6	0	0	0	0	8	0	0	0	0	0	0	0	0
3	2520011374843	5	0	4	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
4	2530003401405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2530011271677	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2540010627132	0	0	0	0	12	0	12	0	0	94	0	30	0	0	0	0	0	0
7	2540011026863	0	5	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
8	2540011860969	0	0	0	180	0	208	8	0	80	292	0	0	0	0	0	0	0	0
9	2590011689871	4	20	35	0	10	0	0	0	0	75	0	30	0	0	0	0	0	0
10	2590011905604	0	0	0	0	8	0	0	0	0	0	0	8	0	0	0	0	0	0
11	2590012505009	0	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
12	2940005370946	8	0	212	60	156	0	0	234	0	0	20	0	0	0	0	0	0	0
13	3040010362989	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	3040012545288	0	0	2	0	2	38	0	0	0	0	0	0	0	0	0	0	0	0
15	3110001014194	0	0	20	12	28	0	0	0	18	36	22	0	0	0	0	0	0	0
16	3120011176328	0	0	0	0	4	10	0	0	0	0	0	4	0	0	0	0	0	0
17	3439001321331	90	0	10	10	0	0	0	7	0	0	0	0	0	0	0	0	0	0
18	3439002528352	0	0	0	20	10	0	0	0	0	66	0	0	0	0	0	0	0	0
19	3740006414719	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	3805011783177	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
21	3805013644471	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	3895002526896	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	4010001293221	0	0	0	8	6	2	12	0	0	14	12	0	0	0	0	0	0	0
24	4010005852108	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
25	4010011096832	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
26	4030000019952	0	6	0	0	6	0	0	0	0	0	6	0	0	0	0	0	0	0
27	4030009487315	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	4030010446040	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
29	4030011420456	0	0	0	0	0	0	0	3	2	0	2	0	0	0	0	0	0	0
30	4110009247845	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
31	4130001539266	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
32	4130001938488	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	0	0	0
33	4130009510806	0	0	6	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0
34	4320009224933	0	0	6	4	68	0	0	0	0	0	0	0	0	0	0	0	0	0
35	4320010981703	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	4330011310279	2	0	8	2	16	2	0	0	0	17	0	0	0	0	0	0	0	0
37	4330011643433	0	22	15	50	4	0	0	0	0	0	0	0	0	0	0	0	0	0
38	4330011903579	728	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0
39	4710002000284	0	1	0	0	1	1	0	0	5	0	0	0	0	0	0	0	0	0
40	4710006099779	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
41	4710007409477	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	4710010053330	0	2	0	0	15	0	0	1	5	0	0	0	0	0	0	0	0	0
43	4710011883516	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
44	4710011888780	0	0	0	0	0	0	0	6	4	0	0	0	0	0	0	0	0	0
45	4710013229315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	4720001776157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	4720002039658	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	4720004613796	0	1	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
49	4720007059542	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	4720009641433	0	0	0	0	0	0	0	3	0	0	2	2	0	0	0	0	0	0
51	4720009770316	0	1	1	0	1	0	1	0	4	0	0	0	0	0	0	0	0	0
52	4720010673891	0	0	0	0	0	0	0	0	6	0	3	3	0	0	0	0	0	0
53	4720010889650	0	0	0	0	0	0	0	6	4	4	0	0	0	0	0	0	0	0
54	4720011233812	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	4720011560549	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	4720011797614	0	0	0	0	0	0	0	0	14	0	0	12	0	0	0	0	0	0
57	4720011816796	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0
58	4720011929602	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
59	4720012122604	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
60	4720013252278	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	4730001188546	0	0	6	0	0	4	0	0	0	0	0	2	0	0	0	0	0	0
62	4730002028469	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
63	4730002660538	0	0	8	0	9	0	9	0	17	0	0	0	0	0	0	0	0	0
64	4730003962962	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
65	4730004926040	4	0	40	0	24	60	0	68	0	28	4	0	0	0	0	0	0	0
66	4730005416584	0	0	26	0	9	0	0	11	0	25	0	0	0	0	0	0	0	0
67	4730006047953	0	0	0	5	3	0	8	0	15	0	0	0	0	0	0	0	0	0
68	4730007205002	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
69	4730008137811	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
70	4730010057253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	4730010707680	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	4730010836059	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
73	4730010900258	0	0	0	0	0	24	30	0	0	0	0	0	0	0	0	0	0	0

74	4730010996474	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0
75	4730011173837	0	0	14	0	12	0	0	12	8	0	0	22	0	0	0	0	0	0
76	4730011196895	0	0	0	0	0	0	0	6	4	0	0	6	0	0	0	0	0	0
77	4730011340854	0	0	0	0	12	0	0	0	10	0	0	0	0	0	0	0	0	0
78	4730011549942	0	0	0	0	0	13	0	0	6	7	15	0	0	0	0	0	0	0
79	4820011589223	0	0	0	0	0	0	0	5	4	0	7	0	0	0	0	0	0	0
80	4930004707354	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
81	5305000213620	0	0	0	0	0	0	0	5	0	0	13	0	0	0	0	0	0	0
82	5305000425567	0	0	17	0	15	0	0	21	25	0	2	0	0	0	0	0	0	0
83	5305000593664	0	0	0	0	0	0	0	23	15	0	0	0	0	0	0	0	0	0

APPENDIX C - AMRD DATA

ITEM NO	12-MONTH AVG DEMAND FOR EACH NSN	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97
1	2510007368622	1	1	1	0	0	0	0
2	2520011272624	2	2	2	1	1	1	1
3	2520011374843	1	1	1	0	0	0	0
4	2530003401405	0	0	0	0	0	0	0
5	2530011271677	0	0	0	0	0	0	0
6	2540010627132	12	12	12	12	12	11	11
7	2540011026863	1	1	0	0	0	0	0
8	2540011860969	64	64	64	64	49	49	32
9	2590011689871	15	14	13	10	10	9	9
10	2590011905604	1	1	1	1	1	1	1
11	2590012505009	1	1	0	0	0	0	0
12	2940005370946	58	57	57	39	34	21	21
13	3040010362989	0	0	0	0	0	0	0
14	3040012545288	4	4	4	3	3	3	0
15	3110001014194	11	11	11	10	9	6	6
16	3120011176328	2	2	2	2	2	1	0
17	3439001321331	10	2	2	1	1	1	1
18	3439002528352	8	8	8	8	6	6	6
19	3740006414719	0	0	0	0	0	0	0
20	3805011783177	0	0	0	0	0	0	0
21	3805013644471	0	0	0	0	0	0	0
22	3895002526896	0	0	0	0	0	0	0
23	4010001293221	5	5	5	5	4	3	3
24	4010005852108	1	1	1	1	1	1	1
25	4010011096832	1	1	1	1	1	1	1
26	4030000019952	2	2	1	1	1	1	1
27	4030009487315	2	2	0	0	0	0	0
28	4030010446040	0	0	0	0	0	0	0
29	4030011420456	1	1	1	1	1	1	1
30	4110009247845	1	1	1	1	1	1	0
31	4130001539266	0	0	0	0	0	0	0
32	4130001938488	1	1	1	1	1	1	1
33	4130009510806	2	2	2	1	1	0	0
34	4320009224933	7	7	7	6	6	0	0
35	4320010981703	1	1	1	0	0	0	0
36	4330011310279	4	4	4	3	3	2	1
37	4330011643433	8	8	6	5	0	0	0
38	4330011903579	67	6	6	6	6	6	6
39	4710002000284	1	1	1	1	1	1	0
40	4710006099779	0	0	0	0	0	0	0
41	4710007409477	0	0	0	0	0	0	0
42	4710010053330	2	2	2	2	2	1	1
43	4710011883516	1	0	0	0	0	0	0
44	4710011888780	1	1	1	1	1	1	1
45	4710013229315	0	0	0	0	0	0	0
46	4720001776157	0	0	0	0	0	0	0
47	4720002039658	0	0	0	0	0	0	0
48	4720004613796	1	1	1	1	1	1	1
49	4720007059542	0	0	0	0	0	0	0
50	4720009641433	1	1	1	1	1	1	1
51	4720009770316	1	1	1	1	1	0	0
52	4720010673891	1	1	1	1	1	1	1
53	4720010889650	1	1	1	1	1	1	1
54	4720011233812	0	0	0	0	0	0	0
55	4720011560549	0	0	0	0	0	0	0
56	4720011797614	2	2	2	2	2	2	2
57	4720011816796	1	1	1	1	1	1	1
58	4720011929602	0	0	0	0	0	0	0
59	4720012122604	1	1	1	1	1	1	1
60	4720013252278	0	0	0	0	0	0	0
61	4730001188546	1	1	1	1	1	1	0
62	4730002028469	0	0	0	0	0	0	0
63	4730002660538	4	4	4	3	3	2	2
64	4730003962962	0	0	0	0	0	0	0
65	4730004926040	19	19	19	15	15	13	8
66	4730005416584	6	6	6	4	4	3	3
67	4730006047953	3	3	3	3	2	2	2
68	4730007205002	0	0	0	0	0	0	0
69	4730008137811	0	0	0	0	0	0	0
70	4730010057253	0	0	0	0	0	0	0
71	4730010707680	0	0	0	0	0	0	0
72	4730010836059	0	0	0	0	0	0	0
73	4730010900258	5	5	5	5	5	5	3

74	4730010996474	1	1	1	1	1	1	1
75	4730011173837	6	6	6	5	5	4	4
76	4730011196895	1	1	1	1	1	1	1
77	4730011340854	2	2	2	2	2	1	1
78	4730011549942	3	3	3	3	3	3	2
79	4820011589223	1	1	1	1	1	1	1
80	4930004707354	0	0	0	0	0	0	0
81	5305000213620	2	2	2	2	2	2	2
82	5305000425567	7	7	7	5	5	4	4
83	5305000593664	3	3	3	3	3	3	3

APPENDIX C - OST DATA

ITEM NO	NSN	SMU QTY	SMU ORDER	SMU RECPT	CUST TRANSIT	GROUND SMU OST	PREMIUM SMU OST
1	2510007368622	8	6169	6193	11	24	14
2	2520011272624	7	6169	6180	5	11	7
		7	6169	6180	9	11	3
		3	6263	6276	7	13	7
		3	6263	6276	7	13	7
		4	7029	7044	8	15	8
		4	7029	7044	6	15	10
3	2520011374843	5	6117	6131	5	14	10
		4	6169	6180	5	11	7
		3	6263	6276	5	13	9
4	2530003401405	0	N/A	N/A	N/A	N/A	N/A
5	2530011271677	0	N/A	N/A	N/A	N/A	N/A
6	2540010627132	2	6233	6250	14	17	4
		2	6233	6250	13	17	5
		2	6233	6250	13	17	5
		2	6233	6250	3	17	15
		2	6233	6250	5	17	13
		2	6233	6250	10	17	8
		2	6305	6319	10	14	5
		2	6305	6319	6	14	9
		2	6305	6319	11	14	4
		2	6305	6319	6	14	9
		2	6305	6319	8	14	7
		2	6305	6319	7	14	8
		14	7029	7044	10	15	6
		14	7029	7044	6	15	10
		14	7029	7044	13	15	3
		14	7029	7044	13	15	3
		14	7029	7044	14	15	2
		14	7029	7044	7	15	9
		5	7070	7076	4	6	3
		5	7070	7076	4	6	3
		5	7070	7076	3	6	4
		5	7070	7076	3	6	4
		5	7070	7076	3	6	4
		5	7070	7076	3	6	4
7	2540011026863	5	6135	6156	15	21	7
		2	6339	6365	15	26	12
		2	7029	7044	8	15	8
8	2540011860969	45	6204	6215	8	11	4
		45	6204	6215	1	11	11
		45	6204	6215	5	11	7
		45	6204	6215	8	11	4
		50	6265	6276	8	11	4
		50	6265	6276	8	11	4
		50	6265	6276	3	11	9
		50	6265	6276	8	11	4
		4	6270	6291	11	21	11
		4	6270	6291	10	21	12
		4	6270	6291	11	21	11
		4	6270	6291	11	21	11
		2	6274	6292	7	18	12
		2	6274	6292	7	18	12
		2	6274	6292	7	18	12
		2	6274	6292	6	18	13
		10	6339	6365	8	26	19
		10	6339	6365	3	26	24
		10	6339	6365	19	26	8
		10	6339	6365	11	26	16
		10	6347	7041	10	59	50
		10	6347	7041	11	59	49
		10	6347	7041	11	59	49
		10	6347	7041	10	59	50
		73	7023	7030	5	7	3
		73	7023	7030	5	7	3
		73	7023	7030	5	7	3
		73	7023	7030	4	7	4
9	2590011689871	1	6103	6128	9	25	17
		1	6103	6128	7	25	19
		1	6103	6128	8	25	18
		1	6103	6128	11	25	15
		1	6103	6128	8	25	18
		4	6135	6152	9	17	9
		4	6135	6152	6	17	12
		4	6135	6152	9	17	9
		4	6135	6152	7	17	11
		4	6135	6152	8	17	10
		2	6159	6176	11	17	7
		2	6159	6176	8	17	10
		2	6159	6176	9	17	9
		2	6159	6176	6	17	12
		2	6159	6176	9	17	9
		5	6169	6193	7	24	18

		5	6169	6193	8	24	17
		5	6169	6193	11	24	14
		5	6169	6193	8	24	17
		5	6169	6193	9	24	16
		3	6171	6193	11	22	12
		3	6171	6193	9	22	14
		3	6171	6193	6	22	17
		3	6171	6193	9	22	14
		3	6171	6193	7	22	16
		2	6242	6256	8	14	7
		2	6242	6256	11	14	4
		2	6242	6256	8	14	7
		2	6242	6256	9	14	6
		2	6242	6256	6	14	9
		7	7007	7023	7	16	10
		7	7007	7023	8	16	9
		7	7007	7023	9	16	8
		7	7007	7023	8	16	9
		7	7007	7023	9	16	8
		1	7023	7036	6	13	8
		1	7023	7036	7	13	7
		1	7023	7036	8	13	6
		1	7023	7036	11	13	3
		1	7023	7036	8	13	6
		7	7029	7034	4	5	2
		7	7029	7034	6	5	0
		7	7029	7034	4	5	2
		7	7029	7034	6	5	0
		7	7029	7034	3	5	3
		6	7064	7086	8	22	15
		6	7064	7086	7	22	16
		6	7064	7086	8	22	15
		6	7064	7086	9	22	14
		6	7064	7086	6	22	17
10	2590011905604	4	6233	6249	7	16	10
		4	6233	6249	4	16	13
		4	6233	6249	4	16	13
		4	6233	6249	5	16	12
		2	7064	7084	6	20	15
		2	7064	7084	6	20	15
		2	7064	7084	7	20	14
		2	7064	7084	8	20	13
11	2590012505009	3	6121	6152	9	31	23
		4	7051	7062	3	11	9
12	2940005370946	2	6103	6121	4	18	15
		2	6103	6121	7	18	12
		2	6103	6121	9	18	10
		2	6103	6121	5	18	14
		36	6171	6239	4	68	65
		36	6171	6239	7	68	62
		36	6171	6239	9	68	60
		36	6171	6239	12	68	57
		17	6179	6192	6	13	8
		17	6179	6192	9	13	5
		17	6179	6192	7	13	7
		17	6179	6192	4	13	10
		15	6204	6213	4	9	6
		15	6204	6213	4	9	6
		15	6204	6213	4	9	6
		15	6204	6213	7	9	3
		39	6242	6254	7	12	6
		39	6242	6254	7	12	6
		39	6242	6254	9	12	4
		39	6242	6254	9	12	4
		78	6305	6320	9	15	7
		78	6305	6320	5	15	11
		78	6305	6320	7	15	9
		78	6305	6320	6	15	10
		5	7039	7055	8	16	9
		5	7039	7055	9	16	8
		5	7039	7055	8	16	9
		5	7039	7055	12	16	5
13	3040010362989	4	6135	6151	10	16	7
14	3040012545288	2	6171	6190	2	19	18
		2	6242	6249	1	7	7
		2	6265	6276	1	11	11
15	3110001014194	10	6169	6185	12	16	5
		10	6169	6185	7	16	10
		6	6202	6226	9	24	16
		6	6202	6226	8	24	17
		14	6242	6257	7	15	9
		14	6242	6257	5	15	11
		7	6263	6276	4	13	10
		7	6263	6276	3	13	11
		12	6264	6274	7	10	4
		12	6264	6274	6	10	5

APPENDIX C - OST DATA

		9	6347	6394	9	47	39
		9	6347	6394	8	47	40
		18	7007	7023	7	16	10
		18	7007	7023	5	16	12
		11	7039	7055	4	16	13
		11	7039	7055	3	16	14
16	3120011176328	2	6228	6243	11	15	5
		2	6228	6243	13	15	3
		5	6264	6282	7	18	12
		5	6264	6282	10	18	9
		2	7064	7086	7	22	16
		2	7064	7086	9	22	14
17	3439001321331	10	6108	6114	4	6	3
		9	6117	6185	12	68	57
		4	6159	6173	13	14	2
		6	6169	6183	7	14	8
		10	6194	6214	14	20	7
		7	6313	6332	13	19	7
18	3439002528352	10	6194	6205	11	11	1
		10	6194	6205	10	11	2
		5	6264	6277	9	13	5
		5	6264	6277	11	13	3
		33	7016	7034	10	18	9
		33	7016	7034	11	18	8
19	3740006414719	0	N/A	N/A	N/A	N/A	N/A
20	3805011783177	2	6233	6255	16	22	7
21	3805013644471	0	N/A	N/A	N/A	N/A	N/A
22	3895002526896	0	N/A	N/A	N/A	N/A	N/A
23	4010001293221	4	6204	6221	14	17	4
		4	6204	6221	8	17	10
		3	6242	6255	12	13	2
		3	6242	6255	6	13	8
		1	6265	6282	11	17	7
		1	6265	6282	9	17	9
		1	6274	6298	4	24	21
		1	6274	6298	6	24	19
		5	6297	7077	12	145	134
		5	6297	7077	14	145	132
		7	7007	7023	11	16	6
		7	7007	7023	9	16	8
		6	7039	7051	4	12	9
		6	7039	7051	6	12	7
24	4010005852108	3	6326	6341	11	15	5
		3	6326	6341	8	15	8
		3	6326	6341	12	15	4
		2	6339	6353	5	14	10
		2	6339	6353	9	14	6
		2	6339	6353	8	14	7
25	4010011096832	5	7029	7050	3	21	19
		5	7029	7050	7	21	15
26	4030000019952	2	6121	6158	9	37	29
		2	6121	6158	16	37	22
		2	6121	6158	5	37	33
		1	6228	6256	9	28	20
		1	6228	6256	10	28	19
		1	6228	6256	9	28	20
		1	6233	6249	9	16	8
		1	6233	6249	7	16	10
		1	6233	6249	5	16	12
		2	7051	7063	9	12	4
		2	7051	7063	10	12	3
		2	7051	7063	9	12	4
27	4030009487315	7	6135	6156	2	21	20
		7	6135	6156	5	21	17
		7	6135	6156	13	21	9
28	4030010446040	1	6121	6155	13	34	22
		2	7039	7051	9	12	4
29	4030011420456	3	6326	6340	5	14	10
		2	6339	6351	10	12	3
		2	7051	7065	8	14	7
30	4110009247845	6	6121	6267	7	146	140
		6	6270	7084	7	179	173
31	4130001539266	5	6326	6341	11	15	5
32	4130001938488	5	6326	6340	10	14	5
		4	6339	6358	10	19	10
33	4130009510806	6	6169	6184	3	15	13
		4	6194	6267	14	73	60
		4	6228	6241	3	13	11
		4	6270	6291	13	21	9
34	4320009224933	2	6171	6276	4	105	102
		2	6171	6276	3	105	103
		1	6179	6268	3	89	87
		1	6179	6268	4	89	86
		2	6204	7076	3	237	235
		2	6204	7076	3	237	235
		17	6241	6268	3	27	25

		17	6241	6268	4	27	24
		17	6242	6268	3	26	24
		17	6242	6268	5	26	22
35	4320010981703	3	6169	6180	7	11	5
		4	6178	6194	5	16	12
36	4330011310279	2	6103	6121	9	18	10
		8	6169	6193	9	24	16
		2	6204	6226	9	22	14
		14	6228	6241	12	13	2
		2	6242	6256	9	14	6
		2	6265	6282	12	17	6
		17	7007	7052	9	45	37
37	4330011643433	22	6134	6152	13	18	6
		6	6171	6190	16	19	4
		9	6178	6197	8	19	12
		25	6208	6226	8	18	11
		25	6208	6271	15	63	49
		4	6242	6255	4	13	10
38	4330011903579	104	6103	6194	10	91	82
		104	6103	6194	57	91	35
		104	6103	6194	5	91	87
		104	6103	6194	38	91	54
		104	6103	6194	23	91	69
		104	6103	6194	5	91	87
		104	6103	6194	65	91	27
		10	7056	7070	8	14	7
		10	7056	7070	8	14	7
		10	7056	7070	13	14	2
		10	7056	7070	5	14	10
		10	7056	7070	13	14	2
		10	7056	7070	13	14	2
		10	7056	7070	8	14	7
39	4710002000284	1	6121	6158	16	37	22
		1	6228	6241	9	13	5
		1	6263	6277	6	14	9
		5	6339	7008	26	34	9
40	4710006099779	0	N/A	N/A	N/A	N/A	N/A
		3	6326	6341	11	15	5
		2	6339	6353	11	14	4
41	4710007409477	0	N/A	N/A	N/A	N/A	N/A
		0	N/A	N/A	N/A	N/A	N/A
42	4710010053330	2	6135	6256	10	121	112
		15	6222	6249	7	27	21
		1	6305	6319	9	14	6
		5	6339	7029	7	55	49
43	4710011883516	5	6117	6134	7	17	11
		5	7029	7044	13	15	3
44	4710011888780	3	6326	6344	14	18	5
		3	6326	6344	9	18	10
		2	6339	6353	5	14	10
		2	6339	6353	5	14	10
45	4710013229315	0	N/A	N/A	N/A	N/A	N/A
46	4720001776157	5	6046	6058	5	12	8
47	4720002039658	0	N/A	N/A	N/A	N/A	N/A
48	4720004613796	1	6142	6162	9	20	12
		10	7007	7034	8	27	20
		4	7029	7051	7	22	16
49	4720007059542	17	7051	7069	9	18	10
50	4720009641433	3	6305	6406	9	101	93
		2	7051	7059	7	8	2
		2	7064	7085	9	21	13
51	4720009770316	1	6121	6152	24	31	8
		1	6169	6183	12	14	3
		1	6228	6256	10	28	19
		1	6291	6310	7	19	13
		4	6339	6354	6	15	10
52	4720010673891	2	6339	7087	5	113	109
		2	6339	7087	8	113	106
		2	6339	7087	7	113	107
		1	7051	7058	7	7	1
		1	7051	7058	6	7	2
		1	7051	7058	5	7	3
		1	7072	7085	6	13	8
		1	7072	7085	9	13	5
		1	7072	7085	5	13	9
53	4720010889650	3	6326	6341	7	15	9
		3	6326	6341	11	15	5
		2	6339	7003	23	29	7
		2	6339	7003	13	29	17
		2	7029	7044	12	15	4
		2	7029	7044	7	15	9
54	4720011233812	0	N/A	N/A	N/A	N/A	N/A
55	4720011560549	0	N/A	N/A	N/A	N/A	N/A
56	4720011797614	7	6339	6351	8	12	5
		7	6339	6351	3	12	10
		6	7072	7078	3	6	4

APPENDIX C - OST DATA

		6	7072	7075	2	3	2
57	4720011816796	3	6326	6341	11	15	5
		2	6339	6353	10	14	5
		5	7007	7023	6	16	11
58	4720011929602	5	7029	7044	14	15	2
59	4720012122604	2	7051	7065	8	14	7
		2	7051	7065	10	14	5
		2	7051	7065	10	14	5
		2	7051	7065	8	14	7
60	4720013252278	0	N/A	N/A	N/A	N/A	N/A
		0	N/A	N/A	N/A	N/A	N/A
61	4730001188546	6	6169	6185	5	16	12
		4	6264	6278	7	14	8
		2	7064	7086	7	22	16
62	4730002028469	3	6326	6341	8	15	8
		2	6339	6353	5	14	10
63	4730002660538	8	6169	6180	7	11	5
		9	6234	6250	7	16	10
		9	6291	6303	6	12	7
		17	6339	6354	5	15	11
64	4730003962962	3	6297	6311	11	14	4
65	4730004926040	1	6103	6162	8	59	52
		1	6103	6162	3	59	57
		1	6103	6162	9	59	51
		1	6103	6162	4	59	56
		8	6169	6180	6	11	6
		8	6169	6180	6	11	6
		8	6169	6180	6	11	6
		8	6169	6180	6	11	6
		1	6171	6185	12	14	3
		1	6171	6185	11	14	4
		1	6171	6185	13	14	2
		1	6171	6185	5	14	10
		1	6179	6197	13	18	6
		1	6179	6197	13	18	6
		1	6179	6197	7	18	12
		1	6179	6197	6	18	13
		6	6242	6255	4	13	10
		6	6242	6255	4	13	10
		6	6242	6255	6	13	8
		6	6242	6255	6	13	8
		14	6264	6276	6	12	7
		14	6264	6276	6	12	7
		14	6264	6276	7	12	6
		14	6264	6276	11	12	2
		1	6270	6285	7	15	9
		1	6270	6285	5	15	11
		1	6270	6285	13	15	3
		1	6270	6285	13	15	3
		16	6305	6319	7	14	8
		16	6305	6319	11	14	4
		16	6305	6319	4	14	11
		16	6305	6319	4	14	11
		1	6313	7007	17	59	43
		1	6313	7007	13	59	47
		1	6313	7007	13	59	47
		1	6313	7007	11	59	49
		7	7023	7037	11	14	4
		7	7023	7037	7	14	8
		7	7023	7037	7	14	8
		7	7023	7037	6	14	9
		1	7039	7055	6	16	11
		1	7039	7055	6	16	11
		1	7039	7055	11	16	6
		1	7039	7055	13	16	4
66	4730005416584	8	5341	5362	4	21	18
		2	6159	6173	4	14	11
		24	6169	6180	10	11	2
		9	6228	6241	9	13	5
		11	6305	6319	7	14	8
		25	7024	7038	4	14	11
67	4730006047953	5	6204	6226	20	22	3
		3	6228	6242	7	14	8
		8	6291	6310	11	19	9
		15	6339	6354	9	15	7
68	4730007205002	4	7029	7050	21	21	1
69	4730008137811	3	6326	6341	12	15	4
		2	6339	6351	11	12	2
70	4730010057253	0	N/A	N/A	N/A	N/A	N/A
71	4730010707680	0	N/A	N/A	N/A	N/A	N/A
72	4730010836059	3	6326	6340	14	14	1
		2	6339	6351	7	12	6
73	4730010900258	24	6264	6276	3	12	10
		15	6274	6295	11	21	11
		15	6291	6310	16	19	4
74	4730010996474	3	6326	6347	17	21	5

APPENDIX C - OST DATA

		2	6339	6354	9	15	7
		5	7029	7051	20	22	3
75	4730011173837	27	5308	5436	25	128	104
		14	6169	6190	18	21	4
		12	6228	6318	24	90	67
		12	6305	6313	6	8	3
		8	6339	7006	16	32	17
		40	6339	7006	29	32	4
		22	7064	7086	20	22	3
76	4730011196895	3	6326	6341	9	15	7
		3	6326	6341	11	15	5
		2	6339	6351	10	12	3
		2	6339	6351	8	12	5
		3	7064	7087	8	23	16
		3	7064	7087	7	23	17
77	4730011340854	12	6228	6241	7	13	7
		10	6339	6351	9	12	4
78	4730011549942	13	6253	6264	8	11	4
		6	6339	6351	8	12	5
		7	7029	7044	13	15	3
		15	7058	7078	15	20	6
79	4820011589223	5	6326	6341	5	15	11
		4	6339	6353	11	14	4
		7	7051	7063	10	12	3
80	4930004707354	3	6326	6339	3	13	11
		2	6339	6353	10	14	5
81	5305000213620	5	6305	6319	10	14	5
		13	7051	7065	1	14	14
82	5305000425567	17	6169	6185	9	16	8
		15	6228	6320	9	92	84
		21	6305	6318	11	13	3
		25	6339	6353	11	14	4
		2	7056	7069	12	13	2
		21	7072	7078	3	6	4
83	5305000593664	23	6326	6341	11	15	5
		15	6339	6353	10	14	5

APPENDIX C - INVENTORY SAVINGS

		COST OF INVENTORY					MONTHLY INCREMENTAL INVENTORY SAVINGS					
ITEM NO	NSN	GROUND RO	PREMIUM RO	DECREASE IN RO	U / P	T/P	INV	OBSOL	OTHER	STOR		MONTHLY INVENTORY HOLDING SAVINGS
1	2510007368622	2	2	0	3.36	0.00	0.00	0.00	0.00	0.00	=	0.00
2	2520011272624	6	5	1	17.41	17.41	0.15	0.02	0.13	0.01	=	0.31
3	2520011374843	2	2	0	3.73	0.00	0.00	0.00	0.00	0.00	=	0.00
4	2530003401405	0	0	0	0.42	0.00	0.00	0.00	0.00	0.00	=	0.00
5	2530011271677	0	0	0	117.92	0.00	0.00	0.00	0.00	0.00	=	0.00
6	2540010627132	40	39	1	1.95	1.95	0.02	0.00	0.01	0.00	=	0.03
7	2540011026863	2	2	0	13.53	0.00	0.00	0.00	0.00	0.00	=	0.00
8	2540011860969	181	162	19	207.92	3950.48	32.92	4.61	29.76	3.29	=	70.58
9	2590011689871	41	38	3	20.64	61.92	0.52	0.07	0.47	0.05	=	1.11
10	2590011905604	4	4	0	1199.67	0.00	0.00	0.00	0.00	0.00	=	0.00
11	2590012505009	1	1	0	18.41	0.00	0.00	0.00	0.00	0.00	=	0.00
12	2940005370946	130	123	7	1.60	11.20	0.09	0.01	0.08	0.01	=	0.20
13	3040010362989	0	0	0	18.32	0.00	0.00	0.00	0.00	0.00	=	0.00
14	3040012545288	12	12	0	253.91	0.00	0.00	0.00	0.00	0.00	=	0.00
15	3110001014194	34	32	2	42.72	85.44	0.71	0.10	0.64	0.07	=	1.53
16	3120011176328	6	6	0	11.98	0.00	0.00	0.00	0.00	0.00	=	0.00
17	3439001321331	8	7	1	6.70	6.70	0.06	0.01	0.05	0.01	=	0.12
18	3439002528352	22	20	2	2.73	5.46	0.05	0.01	0.04	0.00	=	0.10
19	3740006414719	0	0	0	136.90	0.00	0.00	0.00	0.00	0.00	=	0.00
20	3805011783177	0	0	0	82.48	0.00	0.00	0.00	0.00	0.00	=	0.00
21	3805013644471	0	0	0	142.20	0.00	0.00	0.00	0.00	0.00	=	0.00
22	3895002526896	0	0	0	862.48	0.00	0.00	0.00	0.00	0.00	=	0.00
23	4010001293221	18	17	1	8.83	8.83	0.07	0.01	0.07	0.01	=	0.16
24	4010005852108	4	4	0	13.01	0.00	0.00	0.00	0.00	0.00	=	0.00
25	4010011096832	4	4	0	4.50	0.00	0.00	0.00	0.00	0.00	=	0.00
26	4030000019952	5	5	0	5.94	0.00	0.00	0.00	0.00	0.00	=	0.00
27	4030009487315	3	3	0	0.16	0.00	0.00	0.00	0.00	0.00	=	0.00
28	4030010446040	0	0	0	7.84	0.00	0.00	0.00	0.00	0.00	=	0.00
29	4030011420456	3	3	0	0.48	0.00	0.00	0.00	0.00	0.00	=	0.00
30	4110009247845	8	8	0	0.83	0.00	0.00	0.00	0.00	0.00	=	0.00
31	4130001539266	0	0	0	220.23	0.00	0.00	0.00	0.00	0.00	=	0.00
32	4130001938488	4	4	0	28.63	0.00	0.00	0.00	0.00	0.00	=	0.00
33	4130009510806	5	5	0	8.45	0.00	0.00	0.00	0.00	0.00	=	0.00
34	4320009224933	30	29	1	21.70	21.70	0.18	0.03	0.16	0.02	=	0.39
35	4320010981703	2	2	0	11.36	0.00	0.00	0.00	0.00	0.00	=	0.00
36	4330011310279	12	11	1	5.19	5.19	0.04	0.01	0.04	0.00	=	0.09
37	4330011643433	15	14	1	20.34	20.34	0.17	0.02	0.15	0.02	=	0.36
38	4330011903579	66	55	11	7.38	81.18	0.68	0.09	0.61	0.07	=	1.45
39	4710002000284	4	3	1	0.85	0.85	0.01	0.00	0.01	0.00	=	0.02
40	4710006099779	0	0	0	22.66	0.00	0.00	0.00	0.00	0.00	=	0.00
41	4710007409477	0	0	0	10.92	0.00	0.00	0.00	0.00	0.00	=	0.00
42	4710010053330	9	8	1	35.78	35.78	0.30	0.04	0.27	0.03	=	0.64
43	4710011883516	1	1	0	8.92	0.00	0.00	0.00	0.00	0.00	=	0.00
44	4710011888780	4	4	0	5.49	0.00	0.00	0.00	0.00	0.00	=	0.00
45	4710013229315	0	0	0	35.19	0.00	0.00	0.00	0.00	0.00	=	0.00
46	4720001776157	0	0	0	6.69	0.00	0.00	0.00	0.00	0.00	=	0.00
47	4720002039658	0	0	0	10.14	0.00	0.00	0.00	0.00	0.00	=	0.00
48	4720004613796	4	4	0	364.52	0.00	0.00	0.00	0.00	0.00	=	0.00
49	4720007059542	0	0	0	289.91	0.00	0.00	0.00	0.00	0.00	=	0.00
50	4720009641433	5	5	0	26.20	0.00	0.00	0.00	0.00	0.00	=	0.00
51	4720009770316	3	3	0	4.96	0.00	0.00	0.00	0.00	0.00	=	0.00
52	4720010673891	5	5	0	116.70	0.00	0.00	0.00	0.00	0.00	=	0.00
53	4720010889650	4	4	0	7.84	0.00	0.00	0.00	0.00	0.00	=	0.00
54	4720011233812	0	0	0	6.93	0.00	0.00	0.00	0.00	0.00	=	0.00
55	4720011560549	0	0	0	1.40	0.00	0.00	0.00	0.00	0.00	=	0.00
56	4720011797614	6	6	0	26.13	0.00	0.00	0.00	0.00	0.00	=	0.00
57	4720011816796	4	4	0	19.45	0.00	0.00	0.00	0.00	0.00	=	0.00

58	4720011929602	0	0	0	24.65	0.00	0.00	0.00	0.00	0.00	=	0.00
59	4720012122604	4	4	0	3.62	0.00	0.00	0.00	0.00	0.00	=	0.00
60	4720013252278	0	0	0	59.58	0.00	0.00	0.00	0.00	0.00	=	0.00
61	4730001188546	4	3	1	3.92	3.92	0.03	0.00	0.03	0.00	=	0.07
62	4730002028469	0	0	0	3.16	0.00	0.00	0.00	0.00	0.00	=	0.00
63	4730002660538	10	9	1	0.34	0.34	0.00	0.00	0.00	0.00	=	0.01
64	4730003962962	0	0	0	4.76	0.00	0.00	0.00	0.00	0.00	=	0.00
65	4730004926040	52	48	4	2.37	9.48	0.08	0.01	0.07	0.01	=	0.17
66	4730005416584	14	13	1	0.18	0.18	0.00	0.00	0.00	0.00	=	0.00
67	4730006047953	10	9	1	0.53	0.53	0.00	0.00	0.00	0.00	=	0.01
68	4730007205002	0	0	0	6.71	0.00	0.00	0.00	0.00	0.00	=	0.00
69	4730008137811	0	0	0	2.71	0.00	0.00	0.00	0.00	0.00	=	0.00
70	4730010057253	0	0	0	0.22	0.00	0.00	0.00	0.00	0.00	=	0.00
71	4730010707680	0	0	0	2.02	0.00	0.00	0.00	0.00	0.00	=	0.00
72	4730010836059	0	0	0	11.68	0.00	0.00	0.00	0.00	0.00	=	0.00
73	4730010900258	17	16	1	0.46	0.46	0.00	0.00	0.00	0.00	=	0.01
74	4730010996474	4	4	0	4.00	0.00	0.00	0.00	0.00	0.00	=	0.00
75	4730011173837	24	20	4	0.76	3.04	0.03	0.00	0.02	0.00	=	0.05
76	4730011196895	4	4	0	3.36	0.00	0.00	0.00	0.00	0.00	=	0.00
77	4730011340854	6	6	0	1.06	0.00	0.00	0.00	0.00	0.00	=	0.00
78	4730011549942	11	10	1	9.46	9.46	0.08	0.01	0.07	0.01	=	0.17
79	4820011589223	3	3	0	16.52	0.00	0.00	0.00	0.00	0.00	=	0.00
80	4930004707354	0	0	0	91.35	0.00	0.00	0.00	0.00	0.00	=	0.00
81	5305000213620	6	6	0	0.09	0.00	0.00	0.00	0.00	0.00	=	0.00
82	5305000425567	22	20	2	0.19	0.38	0.00	0.00	0.00	0.00	=	0.01
83	5305000593664	9	8	1	14.88	14.88	0.12	0.02	0.11	0.01	=	0.27
												77.85

APPENDIX C - TRANSPORTATION COSTS

MONTHLY TRANSPORTATION REQUIREMENT | MONTHLY INCREMENTAL TRANSPORTATION COST

ITEM NO	NSN	UNIT WEIGHT (LBS)	AMRD	BI-MONTHLY WT	BI-MONTHTLY CUBE	TRACY PREMIUM RATE	TRACY PREMIUM COST		MECH GROUND RATE	MECH GROUND COST		DLA MONTHLY TRANSPORTATION SAVINGS
1	2510007368622	0.08	0	0	0.0030	0.00	0.00	-	0.23	0.46	=	0.46
2	2520011272624	0.20	1	0	0.0175	0.00	0.00	-	0.23	0.46	=	0.46
3	2520011374843	1.37	0	0	0.0040	0.00	0.00	-	0.23	0.46	=	0.46
4	2530003401405	0.02	0	0	0.0005	0.00	0.00	-	0.00	0.00	=	0.00
5	2530011271677	0.01	0	0	0.0001	0.00	0.00	-	0.00	0.00	=	0.00
6	2540010627132	0.01	12	0	0.0006	0.00	0.00	-	0.23	0.46	=	0.46
7	2540011026863	0.20	0	0	0.0052	0.00	0.00	-	0.23	0.46	=	0.46
8	2540011860969	3.00	54	81	0.0545	0.00	0.00	-	18.63	37.26	=	37.26
9	2590011689871	0.06	11	0	0.1320	0.00	0.00	-	0.23	0.46	=	0.46
10	2590011905604	4.50	1	2	0.0480	0.00	0.00	-	0.46	0.92	=	0.92
11	2590012505009	0.02	0	0	0.0025	0.00	0.00	-	0.23	0.46	=	0.46
12	2940005370946	0.10	41	2	0.0030	0.00	0.00	-	0.46	0.92	=	0.92
13	3040010362989	0.00	0	0	0.0000	0.00	0.00	-	0.00	0.00	=	0.00
14	3040012545288	0.00	3	0	0.0000	0.00	0.00	-	0.23	0.46	=	0.46
15	3110001014194	8.00	9	36	0.0330	0.00	0.00	-	8.28	16.56	=	16.56
16	3120011176328	0.06	2	0	0.0010	0.00	0.00	-	0.23	0.46	=	0.46
17	3439001321331	0.55	2	1	0.0040	0.00	0.00	-	0.23	0.46	=	0.46
18	3439002528352	1.01	7	4	0.0000	0.00	0.00	-	0.69	1.38	=	1.38
19	3740006414719	11.00	0	0	0.6945	0.00	0.00	-	0.00	0.00	=	0.00
20	3805011783177	100.00	0	0	0.6140	0.00	0.00	-	0.00	0.00	=	0.00
21	3805013644471	2.40	0	0	0.1620	0.00	0.00	-	0.00	0.00	=	0.00
22	3895002526896	45.00	0	0	12.2222	0.00	0.00	-	0.00	0.00	=	0.00
23	4010001293221	5.68	4	12	0.0625	0.00	0.00	-	2.53	5.06	=	5.06
24	4010005852108	0.10	1	0	0.0012	0.00	0.00	-	0.23	0.46	=	0.46
25	4010011096832	1.75	1	1	0.1000	0.00	0.00	-	0.23	0.46	=	0.46
26	4030000019952	0.22	1	0	0.0006	0.00	0.00	-	0.23	0.46	=	0.46
27	4030009487315	0.01	1	0	0.0005	0.00	0.00	-	0.23	0.46	=	0.46
28	4030010446040	0.10	0	0	0.0035	0.00	0.00	-	0.00	0.00	=	0.00
29	4030011420456	0.10	1	0	0.0005	0.00	0.00	-	0.23	0.46	=	0.46
30	4110009247845	0.05	1	0	0.0030	0.00	0.00	-	0.23	0.46	=	0.46
31	4130001539266	0.03	0	0	0.0000	0.00	0.00	-	0.00	0.00	=	0.00
32	4130001938488	0.20	1	0	0.0125	0.00	0.00	-	0.23	0.46	=	0.46
33	4130009510806	2.00	1	1	0.0055	0.00	0.00	-	0.23	0.46	=	0.46
34	4320009224933	0.25	5	1	0.0070	0.00	0.00	-	0.23	0.46	=	0.46
35	4320010981703	0.13	0	0	0.0070	0.00	0.00	-	0.23	0.46	=	0.46
36	4330011310279	1.00	3	2	0.0350	0.00	0.00	-	0.23	0.46	=	0.46
37	4330011643433	2.40	4	5	0.0650	0.00	0.00	-	0.92	1.84	=	1.84
38	4330011903579	0.43	15	3	0.0047	0.00	0.00	-	0.69	1.38	=	1.38
39	4710002000284	1.00	1	0	0.0030	0.00	0.00	-	0.23	0.46	=	0.46
40	4710006099779	0.50	0	0	0.1405	0.00	0.00	-	0.00	0.00	=	0.00
41	4710007409477	1.49	0	0	0.3747	0.00	0.00	-	0.00	0.00	=	0.00
42	4710010053330	0.50	2	0	0.0000	0.00	0.00	-	0.23	0.46	=	0.46
43	4710011883516	0.24	0	0	0.0799	0.00	0.00	-	0.23	0.46	=	0.46
44	4710011888780	1.49	1	1	0.2747	0.00	0.00	-	0.23	0.46	=	0.46
45	4710013229315	8.76	0	0	0.6852	0.00	0.00	-	0.00	0.00	=	0.00
46	4720001776157	1.02	0	0	0.0556	0.00	0.00	-	0.00	0.00	=	0.00
47	4720002039658	0.25	0	0	0.0050	0.00	0.00	-	0.00	0.00	=	0.00
48	4720004613796	54.00	1	27	1.2500	0.00	0.00	-	6.21	12.42	=	12.42
49	4720007059542	1.00	0	0	0.0040	0.00	0.00	-	0.00	0.00	=	0.00
50	4720009641433	31.00	1	16	1.5000	0.00	0.00	-	3.45	6.90	=	6.90
51	4720009770316	0.26	1	0	0.0130	0.00	0.00	-	0.23	0.46	=	0.46
52	4720010673891	0.00	1	0	0.0000	0.00	0.00	-	0.23	0.46	=	0.46
53	4720010889650	0.12	1	0	0.0625	0.00	0.00	-	0.23	0.46	=	0.46
54	4720011233812	0.63	0	0	0.0070	0.00	0.00	-	0.00	0.00	=	0.00
55	4720011560549	0.10	0	0	0.0015	0.00	0.00	-	0.00	0.00	=	0.00
56	4720011797614	0.05	2	0	0.0090	0.00	0.00	-	0.23	0.46	=	0.46
57	4720011816796	0.50	1	0	0.0155	0.00	0.00	-	0.23	0.46	=	0.46
58	4720011929602	0.00	0	0	0.0000	0.00	0.00	-	0.00	0.00	=	0.00
59	4720012122604	0.10	1	0	0.0290	0.00	0.00	-	0.23	0.46	=	0.46
60	4720013252278	0.01	0	0	0.0000	0.00	0.00	-	0.00	0.00	=	0.00
61	4730001188546	1.00	1	0	0.0010	0.00	0.00	-	0.23	0.46	=	0.46

62	4730002028469	0.30	0	0	0.0110	0.00	0.00	-	0.00	0.00	=	0.00
63	4730002660538	0.08	3	0	0.0050	0.00	0.00	-	0.23	0.46	=	0.46
64	4730003962962	0.01	0	0	0.0005	0.00	0.00	-	0.00	0.00	=	0.00
65	4730004926040	0.13	16	1	0.0006	0.00	0.00	-	0.23	0.46	=	0.46
66	4730005416584	0.10	5	0	0.0005	0.00	0.00	-	0.23	0.46	=	0.46
67	4730006047953	0.10	3	0	0.0045	0.00	0.00	-	0.23	0.46	=	0.46
68	4730007205002	0.54	0	0	0.0010	0.00	0.00	-	0.00	0.00	=	0.00
69	4730008137811	0.01	0	0	0.0005	0.00	0.00	-	0.00	0.00	=	0.00
70	4730010057253	0.01	0	0	0.0005	0.00	0.00	-	0.00	0.00	=	0.00
71	4730010707680	0.10	0	0	0.0005	0.00	0.00	-	0.00	0.00	=	0.00
72	4730010836059	0.00	0	0	0.0000	0.00	0.00	-	0.00	0.00	=	0.00
73	4730010900258	0.01	5	0	0.0005	0.00	0.00	-	0.23	0.46	=	0.46
74	4730010996474	0.15	1	0	0.0052	0.00	0.00	-	0.23	0.46	=	0.46
75	4730011173837	0.06	5	0	0.0045	0.00	0.00	-	0.23	0.46	=	0.46
76	4730011196895	0.30	1	0	0.0010	0.00	0.00	-	0.23	0.46	=	0.46
77	4730011340854	0.01	2	0	0.0005	0.00	0.00	-	0.23	0.46	=	0.46
78	4730011549942	0.50	3	1	0.0025	0.00	0.00	-	0.23	0.46	=	0.46
79	4820011589223	0.00	1	0	0.0000	0.00	0.00	-	0.23	0.46	=	0.46
80	4930004707354	0.01	0	0	0.0005	0.00	0.00	-	0.00	0.00	=	0.00
81	5305000213620	0.03	2	0	0.0005	0.00	0.00	-	0.23	0.46	=	0.46
82	5305000425567	0.01	6	0	0.0005	0.00	0.00	-	0.23	0.46	=	0.46
83	5305000593664	0.01	3	0	0.0005	0.00	0.00	-	0.23	0.46	=	0.46
				199	18.8617							105.80

APPENDIX C - CONSUMABLE TRADEOFF

MONTHLY INCREMENTAL INVENTORY / TRANSPORTATION TRADEOFF

ITEM NO	NSN	I MEF MONTHLY INVENTORY HOLDING SAVINGS		DLA MONTHLY TRANSPORTATION SAVINGS		MONTHLY TOTAL SAVINGS
1	2510007368622	0.00	+	0.46	=	0.46
2	2520011272624	0.31	+	0.46	=	0.77
3	2520011374843	0.00	+	0.46	=	0.46
4	2530003401405	0.00	+	0.00	=	0.00
5	2530011271677	0.00	+	0.00	=	0.00
6	2540010627132	0.03	+	0.46	=	0.49
7	2540011026863	0.00	+	0.46	=	0.46
8	2540011860969	70.58	+	37.26	=	107.84
9	2590011689871	1.11	+	0.46	=	1.57
10	2590011905604	0.00	+	0.92	=	0.92
11	2590012505009	0.00	+	0.46	=	0.46
12	2940005370946	0.20	+	0.92	=	1.12
13	3040010362989	0.00	+	0.00	=	0.00
14	3040012545288	0.00	+	0.46	=	0.46
15	3110001014194	1.53	+	16.56	=	18.09
16	3120011176328	0.00	+	0.46	=	0.46
17	3439001321331	0.12	+	0.46	=	0.58
18	3439002528352	0.10	+	1.38	=	1.48
19	3740006414719	0.00	+	0.00	=	0.00
20	3805011783177	0.00	+	0.00	=	0.00
21	3805013644471	0.00	+	0.00	=	0.00
22	3895002526896	0.00	+	0.00	=	0.00
23	4010001293221	0.16	+	5.06	=	5.22
24	4010005852108	0.00	+	0.46	=	0.46
25	4010011096832	0.00	+	0.46	=	0.46
26	4030000019952	0.00	+	0.46	=	0.46
27	4030009487315	0.00	+	0.46	=	0.46
28	4030010446040	0.00	+	0.00	=	0.00
29	4030011420456	0.00	+	0.46	=	0.46
30	4110009247845	0.00	+	0.46	=	0.46
31	4130001539266	0.00	+	0.00	=	0.00
32	4130001938488	0.00	+	0.46	=	0.46
33	4130009510806	0.00	+	0.46	=	0.46
34	4320009224933	0.39	+	0.46	=	0.85
35	4320010981703	0.00	+	0.46	=	0.46
36	4330011310279	0.09	+	0.46	=	0.55
37	4330011643433	0.36	+	1.84	=	2.20
38	4330011903579	1.45	+	1.38	=	2.83
39	4710002000284	0.02	+	0.46	=	0.48
40	4710006099779	0.00	+	0.00	=	0.00
41	4710007409477	0.00	+	0.00	=	0.00
42	4710010053330	0.64	+	0.46	=	1.10
43	4710011883516	0.00	+	0.46	=	0.46
44	4710011888780	0.00	+	0.46	=	0.46
45	4710013229315	0.00	+	0.00	=	0.00
46	4720001776157	0.00	+	0.00	=	0.00
47	4720002039658	0.00	+	0.00	=	0.00
48	4720004613796	0.00	+	12.42	=	12.42
49	4720007059542	0.00	+	0.00	=	0.00
50	4720009641433	0.00	+	6.90	=	6.90
51	4720009770316	0.00	+	0.46	=	0.46

52	4720010673891	0.00	+	0.46	=	0.46
53	4720010889650	0.00	+	0.46	=	0.46
54	4720011233812	0.00	+	0.00	=	0.00
55	4720011560549	0.00	+	0.00	=	0.00
56	4720011797614	0.00	+	0.46	=	0.46
57	4720011816796	0.00	+	0.46	=	0.46
58	4720011929602	0.00	+	0.00	=	0.00
59	4720012122604	0.00	+	0.46	=	0.46
60	4720013252278	0.00	+	0.00	=	0.00
61	4730001188546	0.07	+	0.46	=	0.53
62	4730002028469	0.00	+	0.00	=	0.00
63	4730002660538	0.01	+	0.46	=	0.47
64	4730003962962	0.00	+	0.00	=	0.00
65	4730004926040	0.17	+	0.46	=	0.63
66	4730005416584	0.00	+	0.46	=	0.46
67	4730006047953	0.01	+	0.46	=	0.47
68	4730007205002	0.00	+	0.00	=	0.00
69	4730008137811	0.00	+	0.00	=	0.00
70	4730010057253	0.00	+	0.00	=	0.00
71	4730010707680	0.00	+	0.00	=	0.00
72	4730010836059	0.00	+	0.00	=	0.00
73	4730010900258	0.01	+	0.46	=	0.47
74	4730010996474	0.00	+	0.46	=	0.46
75	4730011173837	0.05	+	0.46	=	0.51
76	4730011196895	0.00	+	0.46	=	0.46
77	4730011340854	0.00	+	0.46	=	0.46
78	4730011549942	0.17	+	0.46	=	0.63
79	4820011589223	0.00	+	0.46	=	0.46
80	4930004707354	0.00	+	0.00	=	0.00
81	5305000213620	0.00	+	0.46	=	0.46
82	5305000425567	0.01	+	0.46	=	0.47
83	5305000593664	0.27	+	0.46	=	0.73
		77.85	+	105.80	=	183.65

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